Fever.

Autumnal fevers, in all their different forms, are the result of marsh exhalations. It is proper, however, to state, that the marshes, mill-ponds, stagnant pools, &c., are the most fruitful causes; yet we must admit, that autumnal fevers occasionally appear in high situations, & in places which are generally reputed healthy. During the prevalence of the epidemic fever in 1820-21, such places suffered more than those which were low, & usually, much more subject to the disease. This proves, that though many facts have been established with regard to the causes of autumnal fevers; yet we have still much to learn. It is certainly contrary to our usual experience, that Germantown, which has been called the Montpelier of America, should be more sickly than so low a piece of land as that commonly called the Neck, lying below Philadelphia, between the Delaware & Schuylkill. This, however, was the fact during the fall of 1821; & such facts, though they may oppose our preconceived opinions, it is, nevertheless our duty to record.

A question now arises, - What is this autumnal fever? On this subject I shall make a few general observations,

of a practical nature, without any attempt at theory. Autumnal fever is a disease which varies considerably in different subjects, though they all may have been exposed to the operation of the same cause. This difference probably arises from those varieties of constitution, which are either natural to individuals, or result from peculiar habits & exposures. In the same family I have seen every grade of disease from fevers exceedingly dangerous & malignant, to the common intermittent which readily yields to the usual remedies.

There are two general forms of fever, which are the offspring of marsh exhalations – the remittent & intermittent fever. In the remittent there is a temporary abatement of the violence of the febrile paroxysm; in the intermittent a complete cessation of disease occurs for a time, & is succeeded by another paroxysm. A person who has been subjected to the influence of marsh exhalations, & is about to experience their usual effects, is generally warned of the approach of disease by some premonitory symptoms. Instead of being suddenly cast down from a state of apparent health, he is generally listless, indisposed to exertion, with sensations of cold creeping through his body, followed by flushes of heat, pain in the head, back & limbs, sickness of stomach, & sometimes vomiting of bilious matter. Our remittents generally commence with a chill; but, in many instances, a distinct chill is wanting. Nausea is a very

common accompaniment of this stage. After the cold stage, the system reacts; & we have a hot skin, excited pulse, flushed face, pain in the head, restlessness, with other symptoms that mark the existence of fever. These go on increasing, till sometime in the afternoon, the paroxysm generally gets to its height; it relaxes in the evening, & in the morning we often find the patient with a moist &, comparatively, cool skin; or, in other words, a remission has taken place. Yet the intelligent practitioner soon perceives by the excited state of the circulation, the appearance of the tongue, & the general aspect of the patient, that he is labouring under a full-formed fever. This will go on for 5, 7, or 9 days, or even for a longer time. Occasionally it will assume the typhoid form, & become very tedious.

Intermittents are much less to be dreaded than remittents; for, in the first, you have frequent intervals of complete freedom from fever, when you have an opportunity to pour in your remedies freely, & prevent a recurrence of the paroxysm.

But there is a kind of mongrel disease, between the intermittent & remittent, which, in many instances, is more to be dreaded than either of the other forms. This occurred in a few cases in the epidemic which prevailed among us in 1821, & since that period. Every day something like a chill occurred, followed by an exacerbation of fever with an imperfect intermission. Some of the most dangerous cases I attended were of this character.

I will now make a few general observations on a plain, common case of remittent fever, as it is usually with in our country. When developed in a clear uniquivocal manner, this is a disease which, in a large proportion of cases, may be managed with the happiest results.

When called to a patient with an open, full-developed case of common remittent fever, the first indication is to evacuate the stomach & bowels. The practice of attempting, in the first instance, to remove the nausea by antacids, & tranquilize the stomach by anodynes, is generally improper. To produce emesis, in this case, a combination of ipecacuanha & antimonial wine, in the proportion of gr xxx of the formed to a dessert spoonful of the latter, is probably the most suitable; recommending the patient to drink copiously of tepid drinks as soon as the vomiting commences. The cathartic is best produced by a combination of calomel & jalap, in the proportion of gr x of the formed to gr xx of the latter. If this should not produce purging in 4 or 5 hours, a quantity of the neutral salts should be taken every hour, or every 2 hours, until the bowels are completely evacuated, & the stools lose their offensive odour.

In a young & vigorous subject, of an inflammatory diathesis, where there is great restlessness, high arterial action, intense pain in the head, & a burning heat in the surface, V.S. may precede the foregoing remedies. Occasionally bleeding is called for two or three times. But

I wish to guard you against the idea, that by the frequent use of the lancet, you will be enabled to subdue the fever. This is a notion which has been productive of much mischief. By bleeding in every paroxysm, with a view to destroy febrile action, & thus eradicate the disease - without succeeding in your wish, you will exhaust the vital power, & render it less able to struggle against the force of the disease. The remedy is often useful; but I have no doubt that a vast number of cases run their course happily, from their commencement to their termination, without calling for the lancet; & I wish to impress you with the conviction, that to attempt to cut short a fever by repeated bleedings, is a very dangerous practice, a practice which I conscientiously believe has produced a vast deal of mischief. Local depletion is, in most cases, preferable to general bleeding. Cups or leeches applied to the head will often as effectually remove the pain as the lancet, & with much less diminution of strength.

When there is a dry, hot skin, great restlessness, & insatiable thirst, cold ablution will be found quite as effectual as V.S. in allaying thirst, diminishing the restlessness, & restoring the natural state of the surface, without diminishing the strength of the patient. Brandy & water is preferable to vinegar & water, because it more speedily evaporates. In the use of ablution, the strictest attention should be paid to the directions of Dr. Currie of Liverpool. He found that the most advantageous time for using it is,

when the exacerbation is at its height, or immediately after it is begun; though he observes, "It may be used at any time when there is no sense of chilliness present; when the heat of the surface is steadily above that is natural; & when there is no general or profuse perspiration". It is inattention to these precepts that has brought this invaluable remedy into disrepute.

When the patient complains of pain & uneasiness in his head, attended with a flushed face & high febrile excitement, his hair should be cut short; & if this does not mitigate the violence of the symptoms, the head should be shaved & freely exposed to cool air. In cases of high excitement, attended with violent pain, great advantage will be derived from the application of bladders of pounded ice to the head, which should be removed & reapplied as the sensations of the patient indicate.

Attention should also be paid to circumstances generally of minor importance, in the estimation of those in attendance on the sick: such as placing the patient in a cool well ventilated apartment, & allowing him a liberal quantity of cool drinks, among which cool water is the most valuable when there are no circumstances to contraindicate its use, as the presence of a chill, or the stomach & bowels being under the full effect of a dose of cathartic medicine.

Sudorifics are usually found beneficial; & during

their administration tepid drinks should be given. The most agreeable & beneficial article in this class of remedies, is the citrate of potash, administered in the form of the effervescent draught. Antimonial medicines may occasionally be given with decided advantage.

Blistering, in some cases, may be resorted to with the most pleasing result: and if there is any remedy capable of subduing fever, that remedy is, unquestionably, blistering with cantharides. It is peculiarly adapted to cases attended with great uneasiness & distress, without any topical affection; where there are frequent jactitations of the body, & the patient complains of pain & soreness in his limbs. In such cases large blisters applied to the arms or legs will very frequently be productive of the happiest effect.

Tonics & Stimulants are demanded, even in cases which commence with inflammatory symptoms and require one or two bleedings, when, on the 5th or 7th day, instead of a solution of the disease, we find it assuming a low & continued form. In this low form of fever the tongue is often loaded with a thick fur. If this fur clears off suddenly, & leaves the tongue clean, red, & moist, it is generally, if not always, a sure indication, that the patient will recover; though his convalescence will be very protracted & tedious. If the tongue clean suddenly, but remain dry & chopped, the patient is in a very dangerous situation, as these

symptoms are indicative of a fatal termination. On the contrary, if it clean slowly, beginning at the tip & edges, & advancing gradually to the centre, we may expect a speedy & happy termination of the disease, & a rapid & perfect convalescence. When the first appearance of cleaning is perceptible, in cases when it cleans suddenly; when we have the first indication of the loosening of the fur, we frequently discover an alteration in the voice of the patient who complains of a sore throat. This change of voice & sore throat which, on many occasions, is to be dreaded as indicative of great danger, is here to be hailed as the harbinger of convalescence. If the fauces be examined at this period, they will be found red & glossy; evidently showing that they had been covered with a fur similar to that of the tongue, & that the clearing away of this fur, has caused the alteration of the voice & soreness of the throat.

In these low forms of fevers all depressing passions of the mind should be carefully avoided, & all accidental occurrences producing disappointment to the patient, especially those relating to love affairs, should be carefully kept from his hearing.

In this form of disease we not unfrequently meet with a tympanitic abdomen. In such cases the intestines have suffered so much from disease, & become so ~~much~~ debilitated & exhausted, as to be incapable of properly con-

heating on their contents; & their muscular fibres readily yield to the expansion of the gasses they may happen to contain. An object of primary importance in this state of things, is to maintain the peristaltic action of the bowels by remedies calculated, at the same time to stimulate & invigorate the system. The best remedies for this purpose is the tincture of rhubarb with cardamom seed, Warner's gout cordial, and the spirit of turpentine.

It requires considerable attention to regulate the use of stimulants in these extremely low cases of disease; for, in many instances, the quantity of stimulus which is necessary to arouse the system from its state of torpor, would, if improperly continued, produce undue excitement & dangerous consequences. When there is low, muttering delirium with dulness of sensation, I have no hesitation of resorting to stimulation: but when the senses are acute, with loquacity, & a disposition to make remarks on surrounding objects, I am disposed to think the brain is unduly excited, & I feel an objection to employing wine, bark, &c. In such cases I generally apply a blister to the head; yet there are exceptions even to this rule.

Mercury as a remedy in remittent fever, has, at times, attracted a considerable degree of attention. Dr. Wistar, although he prescribed mercury liberally in some diseases, was averse to its employment in this. I be-

lieve that in some particular cases, mercury given with a view to correct the secretion of the liver, may be productive of the greatest advantage: but experience has fully convinced me that a salivation is not capable of arresting the disease. In cases where active evacuation is not admissible, & stimulants are not demanded, I have been greatly pleased with the effect of calomel, in doses of $\frac{1}{12}$ or $\frac{1}{6}$ of a grain every hour, & continued every day, or every other day for some time, agreeable to the directions of Hyde who says it regulates the action of the liver. Mercury thus administered, in these cases, I consider as a remedy entitled to considerable attention & confidence.

It is necessary that physicians should be acquainted with the fact, that occasionally in fever, we meet with a state of the mouth similar to that which occurs in cases of salivation from mercury; but where that medicine has not been administered. Dr. Rush once saw it in a case of pneumonia, & was severely censured by the husband of the lady for having given mercury to his wife without his consent; but no mercury had been given. These cases of spontaneous salivation require the antiphlogistic plan of treatment, & where the subject is young & vigorous, V.S. may be resorted to with advantage.

I will now direct your attention to some forms of fever less rapid in their progress; but requiring great

ease to manage them successfully. Almost every season, either from peculiarity of constitution, or some other cause, we find some cases of remittent fever which deviate from the common course. The remittent, as it usually occurs, may be regarded as a very manageable disease, & in a large majority of instances, the patient recovers: but occasionally it assumes a different aspect, & it is my intention to give an account of some of these anomalous cases.

Case of S. M. — The patient had been engaged in building Friends Meeting house in Twelfth street. A short distance from the building, to the west of it, some ground had been overflown by the heavy rains. He was daily exposed to the miasmata, & felt quite unwell for several days before he was confined to the house. On the day before I was called, he staid at home & was bled by his own direction. Finding himself no better, he sent for me. When I saw him he was complaining of great giddiness in the head, with some pain & general uneasiness through his limbs. His pulse was irritable, but destitute of tension, & it entirely forbade the use of the lancet.

My attention was first directed to the free evacuation of his bowels, & for this purpose I directed a cathartic. I advised a free circulation of air in his chamber, & the liberal use of cold ablutions over the

whole body, when the skin was permanently hot & dry, & there was no sense of chilliness present. On the second day of my attendance, something like cholera occurred. Copious discharges of bile took place from the stomach & bowels, & I perceived the pulse begin to fail very perceptibly, so that I was under the necessity of blistering his wrists, using sinapisms, &c., and of employing occasionally the chalk julep. These arrested the symptoms; & he continued almost in a stationary state, until the night of the 22. Previously Seltzer water had been used freely, sinapisms occasionally, chicken water, &c., & cold ablutions when his fever required them. On the morning of the 23, I was alarmed with the strong tendency of his system to sink. His pulse was very feeble; his stomach, rather irritable; & every symptom indicated great prostration. I resorted again to blisters & sinapisms, & employed wine and essence of beef. I requested a consultation. My friend, Dr. S. P. Griffith, saw the patient with me; & our views of the case corresponded exactly. To prop his system was the prominent indication. During the 23 & 24th, he discharged black blood from the mouth & gums, and also a little from his nose. At this juncture his stomach was irritable. Great benefit was derived from bathing him freely with the decoction of cantharides in spirits of turpentine, as directed by Dr. Hartshorne. It vesicated him slightly from his throat to his abdomen. His

extremities were often rubbed with the decoction diluted with oil. When the heat of his skin sunk below the natural standard, the diligent use of this decoction was of great importance. In order to give tone to his stomach, we gave him the extract of quassia in pills every hour. After they had been given for some time, we gave gtt of volatile alkali every hour, followed by a glass of the decoction of serpentaria. We also plied him most dilligently with good Madeira & essence of beef. The latter was afterward changed for essence of mutton; & towards the conclusion, when he became tired of wine, we gave him porter. Under this treatment he gradually recovered, &, I hope to my humbling admiration.

Case of G. F. – G. F. was a very delicate child, subject to diarrhoea, from an attack of which he had just recovered. When the fever first seized him I was not at all alarmed. For the first day or two, I contented myself with simple treatment. On account of his liability to diarrhoea his bowels were tenderly dealt with, &, after a little evacuation, I relied on mild remedies; such as the Spiritus mindereri, antimonial wine, bathing the feet, & the application of poultices to the soles. In this condition things continued for one or two days. At the expiration of these, however, finding the disease becoming more serious, I resorted to blisters, which did not succeed in arresting its progress. In a short-

time the disease assumed its genuine character, and proved to be a very dangerous malignant fever. The blistered surfaces assumed a dark & bloody appearance. The patient was in a state of constant delirium or stupor; the pulse became slow; & all the symptoms indicated the speedy approach of dissolution. I now resorted to the stimulant plan of treatment. In consequence of the laxative condition of the bowels, I directed Port wine, which possesses the property of astringency to a considerable extent. Dr. Physick was called in consultation, & Dr. Potts gave his assiduous attention to the patient. In addition to the Port wine, which was spiced & administered at short intervals, Dr. Physick proposed the volatile alkali. I was somewhat afraid of this - I thought it probable, that Port wine & volatile alkali would form, in the stomach, a neutral salt which might act on the bowels, & reduce the strength of the patient. It was tried, however, & no inconveniences occurred. The attendants were directed to hinder the patient from sleeping long at a time, as this has a great tendency to prostrate the system. Bark was also exhibited in the course of the case. By the most diligent care & scrupulous attention in the administration of the remedies just mentioned, he gradually recovered.

The next season he was again attacked with fever. Not yet thoroughly acquainted with his constitution,

I calculated that I should be able, by an emetic of ipecacuanha, by pediluvia, early blistering, & inducing perspiration, to succeed in arresting the fever. I was afraid of resorting so early to what I afterwards found to be the proper practice. Two or three days elapsed before any effectual treatment was adopted. I then employed the bark & wine, with other stimulants & tonics; &, connected with these, the use of blisters. Under this treatment he was rescued from extreme danger.

Sometime after this spell, in the succeeding year, he was again attacked. Knowing the peculiarity of his constitution, that when fever laid its hand upon him, it reduced him to the lowest situation, & brought him into the very jaws of death, I determined, not to delay active treatment till he should begin to sink. Instead, therefore, of losing time by the use of sudorifics, after evacuating the alimentary canal by a small dose of rhubarb, regardless of any remission in the fever, I at once commenced with the use of bark & wine; &, to my great joy & the delight of an affectionate mother, the disease was arrested in a short time, & the danger removed as by a charm. The bark was prepared by adding serpentaria & salt of tartar, & forming a hot infusion in Madeira wine. A tea spoonful was given every hour. I now believe that had I been well acquainted with his constitution before the previous attacks, I should have been able, by the same kind of treatment, to have produced the same effect in his first illness. This

example shows, that the common belief relative to the importance of understanding the constitutions of our patients, is not without very good foundation.

Remittents of a mild, & even those of an inflammatory character, run sometimes into a very protracted form. I have often attended patients in this situation. The disease is sometimes so inflammatory in the commencement as to admit of one or two bleedings. The patient goes on tolerably well till that period, (the 7th or 9th day,) when we might have reason to hope for a solution of the fever. About this time the disease changes its form; loses that condition which would admit of venesection or active depletion; & though in common it does not call for stimulant treatment, yet the system languishes, & some support is necessary. In this kind of fever, there is often a state of the tongue which, to young practitioners, is exceedingly fallacious. In common it is covered with a thick crust of fur: but in cases I am now describing, about the 7th or 9th day, the tongue suddenly cleans, & the fur breaks off, not as usual by degrees & commencing at the edges of the tongue, but in large flakes & at once. After it has become clean, instead of presenting the natural papillary structure, it appears smooth & generally red. When I see this glassy appearance of the tongue occur in cases of remittent fever, I am generally confident that the disease will be protracted. In common the patient will recover, but he will be ill for

a long time, & often in some danger. Almost every season, before the end of autumn, a physician in full practice will have to deal with a few cases of this discription. When they run on in such a manner for a long time, they are commonly called nervous fevers. Sometimes the system is worn out, & the case terminates fatally.

In order to illustrate the danger of tympanitic abdomen, I will relate the following case as an example:

Case of O.S. — I was sent for 9th mo. 1814, to see O.S. He was attacked with a mild remittent fever, & at first view, there was nothing that led to the conclusion that the disease was about to be very serious. It proceeded, however, to the low state before described, & all our efforts to rescue him were unavailing. Among the unfavourable symptoms in the latter period of the disease, were profuse sweats. A gentle or even a profuse perspiration, when we may expect the crisis of a fever, may be regarded as a favourable prognostic: but the frequent recurrence of profuse & spontaneous sweats in the latter period of a low fever, so far from being hailed as a good omen, should be considered as directly the reverse. Another unfavourable symptom in the last stage of this case, was tympanites of the abdomen. When in a protracted fever, the belly becomes tympanitic, or sounds like a drumb on being struck, you may always consider the patient in extreme

danger, & may generally predict a fatal termination. This symptom depends on an approach in the bowels to a state of death. Their tone is completely gone; & if they were before irritable, they entirely lose their irritability. The reason of this is plain. The tympanitic state of the abdomen puts a stop to the peristaltic motion; the bowels are very much distended, & the power of contracting on their contents is lost. Sometimes I have seen cases of recovery; but these have been very rare. As an instance of this nature, I will relate the following:

Case of P. — In the autumn of 1821, I attended this young man in consultation with Drs. McClelland & Eberle. He laboured under a low & protracted remittent; & when I first saw him, his belly was tympanitic to a great degree. We tried a strong decoction of the best red bark with a large tea spoonful of Huxham's tincture, every two hours: also a julep composed of half an ounce of spirits of turpentine & four ounces of mucilage, a table spoonful of which was administered every two hours; & ten drops of laudanum were given every four hours. His strength was supported by essence of beef & Madeira wine. He took a glass of wine every hour for several days. Under this treatment he perfectly recovered. We derived much benefit in this case from the aromatic tincture of rhubarb as a mild purge.

Case of J. L. – In the fall of 1821, I attended J. L. who had an attack of fever which commenced like a quotidian, & with symptoms apparently mild. In a short time, however, it assumed a mongrel form, between an intermittent & remittent, & the patient was soon reduced to a state of extreme danger. About the 7th day, his pulse was barely perceptible & his belly tympanitic. I used bark, volatile alkali, &c; but the patient grew worse. I then tried the turpentine julap which had a most remarkable effect. I also used the aromatic tincture of rhubarb for the purpose of maintaining the peristaltic action, which, in these cases, is of vast importance. After an apparent crisis the disease assumed quite a different character. The patient became loquacious, & there was evidently a disposition to phrenitis. I laid aside stimulants & resorted to purgatives, & he recovered completely.

As remittent fevers will engage so much of your attention when you enter into practice, because almost every neighbourhood is more or less liable to them during autumn, it becomes important that we should dwell on the subject more at large, than will be necessary for some other diseases. I will, therefore, detail to you a few cases, differing in some respects from those before related; & will then communicate some observations on malignant intermittents. When treating of the causes which produce malignant remittents, I might have mentioned a case, to show that vegetable matter in a dead or decaying state,

is capable of producing a formidable state of disease. The case is the following:

Case of S. C. — This old man who had lived in New Jersey all his life, finally fell a victim to a dreadful attack of bilious fever. For a few weeks before his attack, the season had been uncommonly wet. He had a quantity of hay in his meadows, which, in consequence of exposure to the rain, was much injured, and so far advanced towards putrefaction as to be very offensive. Having been engaged with his men in spreading out this hay to dry, on his return home, he said the smell was so offensive that he could scarcely bear it. Soon after this he was attacked with some disorder of the stomach & bowels, & felt chilly & quite unwell; but did not confine himself to the house. His indisposition commenced on 7th day; he attended meeting the next day, when coma with a disposition in the system to sink, became apparent. I saw him on first-day afternoon. His countenance had assumed a malignant aspect; his respiration was laborious, & a disposition to coma was evident, though when roused he could give a correct answer to any question. His system was sinking, & he was evidently labouring under a retention of urine. I introduced a catheter, & drew off a considerable quantity. We endeavoured to prop his system by resorting to the most powerful stimulants; but in vain. He died in a few

hours after I left him. It is remarkable that none of his people who were exposed among the hay, were affected with disease.

Another case I think worthy of attention; because after bark had been liberally employed, & had failed of producing the desired effect, we changed the plan of treatment, found the symptoms to improve, & afterwards resorted to the bark with great advantage.

Case of J. D. – The case commenced like a quotidian with chill & fever followed by sweat, every day. The patient complained considerably of the head; but his pulse would not admit of bleeding. The state of the bowels was attended to, & then Serpentaria was employed. Afterward bark was used, but without arresting the disease. His stomach was at first rather irritable; &, by the use of warm water, he vomited freely. – He is subject to dyspepsia, for which I had once attended him. On the morning of the 27th, though he had taken ℥ij of the bark in substance, the preceding day, I was alarmed at finding him in a state of great debility, with an extremely frequent & feeble pulse. I ordered Madeira wine, & blisters to the wrists, & requested further advice. Dr. Wistar saw him with me. As the bark had failed, we suspended its use, & resorted to Serpentaria & Selltzer water, with blisters to the legs. The bowels, when his system admitted it, were gently evacuated; & finding that his fever continued, Dr. Wistar proposed antimonial powders, so as to nauseate

the stomach. This effect was watched closely, to observe how they might be borne. They certainly produced a happy effect, & a very distinct remission was observed. Bark was now tried again, & with success. The case was peculiar in consequence of the great debility, & uncommon frequency of pulse – I think it was 130 strokes in the minute.

Case of A. K. – In the beginning of the 10th month, 1818, I was called to see this little girl who was extremely ill. She was delirious; but her delirium was of a peculiar character. Her hearing was acute, & her sensibility to the impression of surrounding objects was great. In fact it seemed as if the affection of the head was of the phrenetic character; & although there was great apparent prostration, I delayed stimulants in consequence of the great sensibility of her mind: for, as I have already told you, whenever, in fever, I see low, muttering delirium with evidences of great debility, I have no fear of the head; but when I observed an acute state of the mind, with a disposition to make observations on surrounding objects, together with great quickness of hearing, I am inclined to believe that the brain is excited, & stimulants, of consequence, improper. I advised a blister to the head, which her parents opposed. About this time her alvine discharges & her urine became bloody. Sordes collected about her mouth, & her tongue was brown & dry. I now determined on the use of wine without reference to the head. After this Dr. Dorsey saw her with me. We

now blistered her head, & with the wine gave 8 or 10 drops of laudanum every few hours. Notwithstanding the threatening symptoms of her head, she completely recovered. But her tongue cleared smooth, & her convalescence was very tedious. She had a frequent, febrile pulse for several weeks, & bark was used advantageously.

Case of Mary K. — On the 29th of the same month in which I visited A. K., I was called to see her sister Mary who was attacked with chilliness, pain in the head & bones, &c. I did not think that she required V.S.; but cleared the first passages by an emetic & cathartic. A most alarming state of debility followed these evacuations, so that I was under the necessity of flying at once to blisters, sinapisms, the free use of wine, & animal soups. These remedies roused her. But, though she was rescued from imminent danger, yet a low state of fever continued for several weeks, & required the employment of wine, bark, soups, oysters, opiates, & occasionally, mild cathartics. Ablutions of brandy were also used with advantage. She recovered.

Case of E. K. — Another sister was attacked on the 3rd of the 11th month. The first passages were cleared; but she soon passed into a very feeble state. Her tongue became foul & dark, sordes collected about her lips & teeth, & she complained greatly of her head: But from my experience in her sister A's case, I made this a secondary considera-

tion. I had the hair shaved off, & for some days stimulated the scalp with mustard, & at last applied a blister. The extremities were also blistered. I gave her about a wine glassful of wine every hour, & a pap-spoonful of Hugham's tincture every two hours. I was particularly careful to keep the bowels open with gentle medicine, especially with rhubarb. About the crisis of the disease, I thought it was all over with her. She had several large & perfectly involuntary evacuations from the bowels, which I consider a very dangerous symptom in an adult. In young persons, I do not so much regard it. One day I visited her soon after she had had a large involuntary evacuation in bed. At this time her countenance had a very unpromising aspect; & her respiration was laborious, amounting almost to low & frequent groaning. I directed a blister to the breast, & gave her strong wine they very freely, & volatile alkali every hour. She revived, & her tongue began to clean. The dark coat broke away, & it cleaned rather smooth - a sure sign of a tedious convalescence.

A little boy, brother to these young women, I also attended at the same time. He was very ill. I not only blistered his head; but also his extremities. I applied sinapisms to the scalp before blistering - This is, in some cases, a good practice. He recovered under the same plan of treatment, as that which was employed in the case of his sisters. His tongue cleaned smooth, & convalescence was tedious.

Case of B. A. – I was called to B. A. on the 27th of the 10th month, 1818. He had been ill several days before I saw him. His complaint appeared to be a remittent, & from the apparent action in his system, I thought he would bear bleeding in addition to cleansing the first passages. But his pulse soon became very weak; although he bore the bleeding well; & his head was much relieved by it. I blistered his wrists: but notwithstanding all my efforts, great debility succeeded – his tongue became almost black, sordes collected about his teeth & lips, his pulse was very weak & frequent, & he was affected with subsultus tendinum. I now commenced a smart stimulating plan. I directed a glass of wine every hour, a dessert spoonful of the best Huxham's tincture every 2 hours, with the free use of calves foot jelly, essence of beef, &c. His head was shaved, & a sinapism applied to the scalp. My friend, Dr. Morse, saw him with me. But before this, finding that the remedies used did not rouse his system as I wished, I put him upon the use of the turpentine julap. A table spoonful was given every hour. The effect of the turpentine was a most happy one. His system responded to the treatment; his tongue cleared suddenly & smooth, & his recovery was consequently slow. When he was in his most dangerous state, he was unable to protrude the tongue – This I regard as a dangerous symptom. He was covered with a morbid sweat; & one morning he was supposed dying: he was in a pro-

found coma; his pupils were contracted, & he could neither speak nor swallow. I directed sinapisms, & frictions with the decoction of cantharides & spirits of turpentine. Whether this coma depended on 20 or 30 drops of laudanum, taken in the night, I could not say: be that as it may, it, happily, passed off. He discharged his urine involuntarily; but I believe he did not his fæces. After his tongue cleared, he had a pulse of 120 for several weeks – I think I have observed this pulse in convalescents when the tongue cleans smooth & glossy.

The turpentine is a most valuable remedy in some of these cases; & when we wish to stimulate to a great extent, it is sometimes preferable to brandy. It stimulates the system without producing any direct determination to the brain, which is not the case with ardent spirits. As it is liable to produce a cathartic effect when given in large doses, it is proper to administer it in small quantities frequently repeated; & if it should still purge, to add a little laudanum. The turpentine may have a good effect in those cases, in which the bowels are distended with flatus, & the abdomen becomes tympanitic. Tympanitis of the abdomen is a very dangerous symptom, from the cause which I have before mentioned; the same remark will apply to distension of the stomach. I recollect a fatal case of hiphus, I once saw with Dr. Perkins. The stomach of the patient was

like an inanimate bag. When water was poured into it, it could be distinctly heard gurgling in the viscus, without the organ itself appearing to have any contractile power. I have generally prescribed the turpentine in this form: I direct half an ounce of Pulv. Gum. Arab. & the same quantity of loaf sugar, four ounces of cinnamon water, & 120 drops of spts of turpentine. This is in the proportion of about 15 drops to each table spoonful, which I direct to be given every hour,

I will now close the subject of remittent fever with one or two remarks. Among the remedies proposed in this disease, mercury, at one time, held a distinguished rank. My preceptor, the late Dr. Wistar, never had a favourable opinion of mercury in remittents. A case fell under his & my observation, which went to prove that it is not capable of arresting the progress of the disease. In the fall of 1817, I attended a patient in consultation with Drs. Wistar & Gibbard. The case was a most violent attack of bilious remittent, in a powerfully strong man, about 30 years of age. He died about the 11th day from his attack. In the early part of his illness, Dr. Gibbard, after bleeding the patient & giving him an emetic & a cathartic, put him on the use of mercury. His mouth was evidently rendered sore by the mercury: yet it did not appear to cause the slightest change in his symptoms. In confirmation of this I will state, that in the epidemic which occurred in the autumn of 1822,

Dr. Atlee informed me he had one female patient that was severely salivated, without appearing in any degree to arrest the fever. And Dr. John Wilson Moore informed me that the same thing occurred in the Pennsylvania Hospital, during the period of his attendance.

Although I do not believe that mercury will arrest the progress of remittent fever; yet since reading Aspin's work on Marasmus, I feel satisfied that in remittents, especially in the protracted forms of the disease, & in nervous fever, as it is called, very small doses of mercury may be advantageously employed. I speak not theoretically, but practically. I often use $\frac{1}{6}$ or $\frac{1}{4}$ of a grain every one or two hours. It seldom interferes with the ordinary modes of treatment; & it appears to me to have, when given in this way, a most wonderful influence over the liver, correcting the morbid secretions of the liver, & causing more healthy bile to be emulgied into the intestines; thereby rendering them more soluble, & I believe doing, in some way or other, much good. In pursuing this plan I never desire to salivate.

In remittent fever, I have met with a few instances of sore mouth, resembling that induced by mercury, although none of this medicine had been administered. It is well to be aware of this circumstance, so that should such cases occur to you hereafter, you may be prepared to answer any charges which may be made to your disadvantage.

Malignant Intermittents.

Having completed the remarks which I had to make on remittent fevers as they occur out of the usual course, I will now detail to you, a few cases of malignant intermittents.

Case of J. M. J. — The subject of the present note had been down to Appoquiminink to superintend the clearing of some wood-land. There he contracted his disease. He returned sick, & I saw him at his brother's over Schuylkill. At first it appeared like a quotidian, & I thought on my second visit that it would yield to the use of bark: but in this I was disappointed. His disease suddenly assumed a malignant & alarming appearance. I think I never witnessed a more distressing train of symptoms in the accession of a paroxysm. He was in a state of extreme depression, & his nervous system was excessively affected. He appeared every moment as if he would faint, insisted on having the windows opened, & made most distressing efforts to vomit. His pulse was extremely feeble; his skin cold, & his respiration so much affected, that he complained of being unable to get his breath. While the patient was thus affected I saw him & gave some vol. sp. ammo. in water, as this happened to be at hand: but it really appeared to increase his distress. I placed a very large

blister over the region of the stomach, & made the same application to his extremities. I also employed hot applications, as sinapisms, &c; & gave as internal stimulants, Madeira wine, Sufentania, porter, essence of beef, calves' foot jelly, &c, &c. The treatment was, in many respects, similar to that of S. M,'s.

In some cases of great prostration, I have observed this difficulty of respiration do depend on a sinking consciousness of the patient, that some cause exists which prevents the lungs from properly fulfilling their office. This is particularly the case in typhus fever: the patient makes most violent efforts to inhale, but such is the extreme torpor of the nervous system, that the lungs are incapable of oxygenating (decarbonizing) the blood; & hence the sense of suffocation which the patient so distressfully exhibits. The breathing, in such instances, reminds me of the horses of Dupuytren which, when the 8th pair of nerves were divided, exhibited the same laborious & heaving respiration.

The following interesting case is more in detail.

Case of J. W. — 6th mo. 5th, 1815. I was called yesterday to J. W. whom I attended last fall in a common intermittent. In his present illness he appeared he appeared to be labouring under a regular quotidian of a few days standing, & was seen by my friend Dr. Galloway for me, while I was on a visit to Burlington. The Dr.

had bled him, & given him an emetick. I saw him twice to-day, & in the evening found him with a moist skin, & an absence of fever. I directed a decoction of Serpentaria to be taken cold, beginning early in the morning.

7th. He was taken with his chill this day, & became extremely ill. I saw him about 12 o'clock, & found his situation dangerous in the extreme. He was affected with violent, spasmodic pains; sometimes in one side, & then in the other; sometimes extending from under the left clavicle downward towards the pubis — he would scream out violently with the pain. His respiration was hurried; his pulse almost too frequent for enumeration; his skin cold; his countenance shrunk; & it really appeared as if his system would sink under the load of disease that now oppressed it. His stomach, that vital part, which so often sympathizes with, or rather is involved in, violent affections of the nervous system, was affected with a severe retching, which appeared greatly to increase his distress. I immediately resorted to the liberal use of Laudanum, brandy toddy, ginger tea, & sinapisms extensively applied. These last affected him smartly & speedily. I directed his feet to be immersed in hot water by placing them in a flat tub containing the water, & put under the bed clothes. This occupied the practice for about two hours. But as his system did

not rise as I hoped for, I directed frictions of the decoction of cantharides mixed with oil, to be made to his lower extremities; & blisters to be applied to his wrists: a blister was also placed on his side. At my desire Dr. Galliher saw him with me; & we at once concluded to give bark a fair trial. We began with it in substance, adding the tincture to each dose; & by taking it in small quantities frequently, he got down about ℥j. At this time his stomach began to reject it. We then substituted a strong decoction, & gave a table spoonful every hour with half a table spoonful of Huxham's tincture: 30 drops of laudanum were given occasionally when the patient was restless. One of my pupils remained with him during the night; &, as it was desirable to support his strength with nutriment, he took, frequently, essence of beef & calves' feet jelly.

8th. This morning he is still very weak; his pulse is very small & feeble, & beats upwards of 120 strokes in a minute; his countenance is very yellow; & his tongue is coated with a yellow fur. We directed a continuance of the same plan, with the addition of gr iij of opium in anticipation of the paroxysm, which he most happily escaped. We found him, however, in the evening, still with a frequent & very feeble pulse; but, on the whole, rather improved. We ordered a regular continuance of the bark every hour,

& drinks & nourishment as before. One of my pupils was again left to pass the night with him.

9th. He has taken his bark regularly, & is evidently a little improved. But as we greatly dreaded the accession of the paroxysm, we gave him, at 10 o'clock, gr iv of opium, & continued the bark as before. The opium he has heretofore taken has had very little effect in causing sleep, & his head has been remarkably free from pain, & his intellect clear. Happily, for the poor fellow, he again escaped his paroxysm this day. We continued the bark through the night.

10th. This morning we found him generally improved; his strength increased; his pulse stronger & less frequent. We directed his bark once an hour, instead of half hour. The patient recovered perfectly under the use of tonics particularly bark.

These cases of intermittent fever, happily, are rarely met with in practice. When you see them you will be alarmed, & will be under great apprehension of speedy death. In the cold stage, the system seems to be weighed down by the force of the disease, & rises with the utmost difficulty. Dr. Hewson informed me that he had a case of this kind at Camden. Though he visited the patient at the expected time of the accession of the paroxysm; yet, notwithstanding all his efforts, the system sunk, & the patient died in the paroxysm.

The most distressing symptoms – a cold skin, shrunk & ghastly countenance, frequent & feeble pulse, violent

agitation of the whole system, vomiting, & laborious efforts at respiration, mark the cold stage of a malignant intermittent fever.

Yellow Fever.

This is certainly a very interesting disease, inasmuch as it has often carried terror with through the principal cities of the United States. The time has been, & may again occur, when in some of our cities, it might with propriety be denominated "the pestilence that walketh in darkness, & wasteth at noon day."

Previously to the description of the disease, it proper that we should inquire, whether it is contagious or non-contagious; of domestic or of foreign origin.—Before we enter upon this inquiry, it may not be amiss to remark, that a most obstinate & melancholy dispute arose among the physicians of this city, many years ago, relative to the subject which we are about to discuss. Yellow fever became a medical Babel; a confusion of language arose, & many unpleasant circumstances resulted. Two parties were formed; &, as among men engaged in politics, the democrats & federalists; so among physicians, the contagionists & non-contagionists were arrayed against each other. Some of the most distinguished & worthy practitioners of Philadelphia were warmly engaged in the dispute. Passion was enlisted, personal feelings were excited, & I look back with regret

on scenes which, as long as they are remembered, must be painful. These contests exist no more: they have gone down to the grave; & it is to be hoped that the disposition which accompanied them has departed forever. When we reflect on the subject, we may exclaim, peace to the memory of men of worth: if they erred in some things, they were, on the whole, an honour to their profession, & deserve to be remembered with gratitude.

But now, the present generation may take up the subject with different feelings. We have never written books; or, in other words, we have never staked our reputation on the contagious or non-contagious nature of yellow fever. The age of most of us forbade our being engaged in the contest of 1793. Hence we may now coolly & philosophically examine into the question.

That yellow fever is, under certain circumstances, a contagious disease; & that it may be introduced from foreign countries, I do fully believe. As far back as 1762, or thereabouts, (I do not recollect the year precisely,) a striking instance was afforded, in the city of Philadelphia, of the contagious nature of yellow fever. A gentleman died in the West Indies of this disease, & his clothes were sent home to his friends in Philadelphia. They were placed in a store near the wharf; &, at the time in which they were examined, it happened that a number of persons were present, & among the rest, the grandfather of Dr. Samuel P. Griffitts. Several of these individuals were seized

with the yellow fever, & in a short time died. From this point the disease spread to the contiguous houses, & a great alarm was excited through the town.

But the destruction was not to be compared to what took place many years afterward. It is a remarkable fact, which must be admitted by every one to be true, that whenever the yellow fever has occurred in our city, it could always be traced to one point, & that point has always been somewhere on the shore of the Delaware. Soon after its appearance, when several persons had fallen victims to its fury, we could, with considerable precision, trace the cases which occurred, either to a communication with the sick, or to an exposure in that part of the city which was the first starting point of the disease. At last, when it became general, the tracing of particular cases was entirely done away. Yet candour induces me to state, that, so far as my observation extended in 1820, when the cases were but few, I found no instances of contagion from those who sickened out of the infected district. Yet certain cases occurred about Duke street & its vicinity, which I did not see, that were referred to exhalations from Peg's run by some practitioners, & by others traced to a boy who died in consequence, it was said, of having been in the infected district. The progress of the fever, however, was, for some time, very gradual. Hence, after we heard of the death of one, several days elapsed before many others were seized. It seemed to be confined to partic-

ular neighbourhoods, spreading from house to house like a devouring fire. In this respect it differed essentially from those diseases which are the result of marsh miasmata. In these, when the complaint has once set in, it spreads with considerable rapidity, & the whole country is, in a short space of time, more or less affected.

Opposed to the doctrine that the yellow fever is a disease sui generis, & of a contagious nature, it was asserted by many to be nothing more than the common bilious fever, of our country, of a high grade. This was the favourite opinion of Dr. Rush. Now, if bilious fever of a high grade depended upon the causes which produce this disease, it would be reasonable to suppose, that in the seasons when yellow fever prevailed in the city, those situations which were most exposed to marsh miasmata, would be more affected with the complaint, & in a more malignant form, than other parts: but the fact was precisely the reverse. In the Neck, a strip of land lying between the rivers Delaware & Schuylkill, below the city, where intermittent and remittent fevers are very common, it is remarkable that in some of the years, when the yellow fever prevailed in the city, the inhabitants were unusually healthy. This was particularly the case in the year 1793. Fevers depending on marsh miasmata affect the system again & again. Indeed it seems as if there were an increased susceptibility in the patient to the disease, when again exposed to the same cause. For example, let us suppose a person who,

year after year, has been subject to the fever & ague, to be placed with another man, who has never been afflicted by the complaint, in a situation exposed to the action of miasmata: so far from being the last, he will probably be the first to experience it. Instead, therefore, of wearing out the susceptibility to a return of the complaint, these fevers seem to increase it. Hence, in countries subject to the fever & ague, we find persons whose constitutions are, comparatively shattered by frequent attacks of this disease. Nothing is more common than to see patients with the ague-cake or enlarged spleen, & a yellow, sickly countenance, which indicates a worn-out state of health. Now yellow fever is exactly the reverse of this. I hold it to be a principle, capable of the clearest proof, that persons who have once been attacked with this fever, so far from being left with an increased susceptibility, lose it almost, if not, entirely. To illustrate this statement, a prominent fact can be adduced: Let us take the medical men as a body, & begin in the year 1793; when the disease occurred in that year, only one or two of the physicians then existing had ever practiced in it; the rest had never seen it, nor had they ever been exposed to its influence.— Drs. Rush, Physick, Wistar, Griffitts, James, &c., were then, comparatively, young practitioners. What was the consequence? Scarcely a man of them escaped the disease: they were almost all of them taken down, many were very ill, & a number died. Well, let us now mark those same men who

stood the storm of '93. What became of them? Since that time many thousands have been swept away; but has any one of these physicians been of the number? Not a man. Few of them have even had the disease. Dr. Physick says he has had it repeatedly. This I do not deny: but I cannot help saying, that he had a very accommodating yellow fever. Of those who survived the storm of 1793, not a single man has died; whereas, during the yellow fever in 1798, & subsequent visitations of this epidemic, a large number of young & unseasoned practitioners, have been affected with the disease, & many have fallen victims to its violence. Dr. S. P. Griffitts is a man whose authority I consider very high. For a long time he was exposed to the yellow fever, & stood faithfully at his post from the year '93 to the present time. His testimony is, that he has rarely, if ever, seen a decided case of a second attack of yellow fever: at any rate, he will go this far; that he has never seen an instance of death from a second attack. This opinion would have been derided some years ago by a great majority of physicians. But the fact to which I will now refer you, is important to be known. All soldiers in the army are registered, so that they can be traced from one place to another, & can always be discriminated. It so happened that when the yellow fever raged at Gibraltar, one or more of the regiments had been affected in other countries. Among these there was not a single officer or private soldier attacked with the

fever, while their companions were dying around them in great numbers. And I may remark, incidentally, that at Gibraltar, a rock bare & rising to an immense elevation above the ocean, miasmata could not have been the cause of the disease. The report of a committee of physicians who were appointed to examine into the nature of the yellow fever, as it occurred at Gibraltar and other places, is worthy of an attentive perusal. I admit that it may possibly be taken a second time: But I consider these cases as rare as secondary small-pox. But in opposition to what I have said, it may be urged that the yellow fever was not communicated in the country; & therefore, cannot be considered as contagious; for those complaints which are universally acknowledged to be contagious, as small pox, measles, &c. are propagated alike in all situations. I admit freely that the complaint under consideration seldom spreads in the country. I have lived in the yellow fever hospital, in the neighbourhood of Philadelphia, for months, & several hundred cases came under my notice. I have seen the nurses lie down in the very beds where the patients had been placed, & go to sleep in the wards, wrapped up in the clothes which had lately covered the sick, & even the dead; & yet, I must acknowledge, that no instance of death occurred among them, except one or two when the patients had contracted the disease in the city. But though the yellow fever seldom spreads in the country,

yet it sometimes does. Instances may be found, where under peculiar circumstances, the disease was fatally communicated in the country. In the year 1808, a friend named Kirkbright, from Bucks county, came to Philadelphia to attend the yearly meeting. He contracted the fever, went home, & died. His daughter who throughout his sickness, acted as a faithful & tender nurse to her father, received the disease & died also. Dr. Wistar who dwell near Germantown, recorded some instances, (& laid them before the college of physicians,) where the communication of the fever was striking. It was brought from Philadelphia in the first place, & afterward spread from house to house; nor did it cease before several persons had fallen victims to it.

But even admitting that the yellow fever cannot spread in the country; it argues no more than this: that the air of the country is not a soil congenial to its growth. The city air is more congenial to it: here its seeds sometimes spring up, flourish most luxuriantly, & produce, as their fruit, the most fatal consequences. If we regard the variety of seeds in the vegetable world, we shall find, that in the same soil, some will flourish, while others will perish. The principle of vitality exists in the seed; but its action depends on its meeting with something capable of eliciting it. Thus it is with yellow fever: in certain seasons, & in certain situations, its seed will remain inactive & perish;

while in crowded cities, & in the heat of summer, they may meet with a soil perfectly adapted to them.

It disappears with frost. This must be admitted; & is one argument which would favour its origin from those causes which induce bilious fevers. But if this disease were a high grade of bilious fever, as the non-contagionists have contended, how did it happen, that in the year 1793, it was so little understood? Men of the most distinguished talents & respectability in their profession, had been accustomed to treat bilious fevers, in all its varieties, for 20, 30, & even 40 years: yet when the yellow fever came, every candid man will acknowledge, that it was a peculiar disease which he had never seen before, & one which he did not understand. When it first appeared, I have been informed, (for I was too young myself to know,) that a physician would be called to a patient labouring under a fever; would attend two, three, or four days, & would then find a pleasing remission which induced him to expect, in a few days, the complete restoration to health. If the question were put to him, – Dr. how is your patient? he would cheerfully answer, that he was rapidly recovering. Perhaps the next day, or the day after, if the question were put to him, he would declare the melancholy fact, that his patient was no more! Now had it been a high grade of bilious fever, practitioners would have known more about it. Dr. Rush used to tell us in his lectures, "Beware

of the natural pulse, the natural tongue, & the natural skin, in yellow fever." It is a fact that fatal cases have occurred with all these. This is contrary to bilious fever, in its most malignant character. Diurnal exacerbations & remissions may be observed in this complaint, down to the very period of death.

The black vomit is another distinguishing mark. The genuine black vomit, (though it has often been attributed to bilious fever, seldom, if ever, attends it,) was a very common symptom of yellow fever. - I shall hereafter point out the difference between the genuine black vomit, & the dark bile which is frequently puked up in bilious diseases.

While on this subject I may mention the walking cases. These constitute a very striking distinction between the two complaints, being entirely unknown in common bilious fever. Let a man become ill of this disease - where shall we find him? He will be in bed, unless he may occasionally be excited to action by delirium. But in the early stage, muscular debility is almost an invariable attendant of bilious fever. On the contrary, in yellow fever, the strength will remain at a time when the circulation is almost gone; & hence walking cases are well understood by physicians accustomed to the disease. Sometimes the patients walked in the street, entirely pulseless; & dropped down dead before any one thought of their being seriously affected. Dr. Dorsey

who was well acquainted with yellow fever, found a patient in Market street, in this condition. He saw a crowd collected round a man: he stepped up & placed his fingers on the pulse; he found there was none to be felt; he recognized a case of yellow fever, & directed that the man should be sent to the Hospital. Some of the people around him, called him a fool, & denied that the complaint was yellow fever. The patient came under my care in the Hospital, & died in less than 24 hours. While I was residing at the Hospital, a patient with a bundle on his back, walked from the Neck, & presented himself for admission: he had no pulse, or it was barely perceptible. Within 24 hours he died. It was not uncommon for patients to present themselves for admission, when, a person accustomed to the complaint, would pronounce, that they must certainly die. I recollect one case, when the man ran about the lot, & stoned the nurses who pursued him; he was, notwithstanding, destitute of a pulse. This is different from any thing we meet with in bilious fever.

Sore throat & a red eye, particularly the former, were symptoms which occasionally attended the walking cases. I recollect a man with these symptoms, who was highly offended, that we should suppose him ill, & insisted that nothing was the matter with him. We who were accustomed to the disorder, apprehended the utmost danger, & our apprehensions were soon justified by his death.

These cases I have mentioned to shew, that the dif-

fever is very great between bilious remittent, & yellow fever. Here a question might present itself to you;— What advantage can be derived from an investigation of this kind? Our object is to cure the disease; why should we spend time in endeavouring to ascertain the manner of its propagation, when, after all our efforts, the subject may remain undecided? The answer is plain. As medical men we are placed in a responsible & awful situation: we are looked up to as the guardians of the publick health: upon our opinion, in some measure, must be grounded the laws of our country; & when we ~~reflect~~ recollect that populous are most commonly the places visited by the disease, the subject presents itself in an important point of view. If the complaint is contagious, it then becomes necessary to avail ourselves of the means calculated to prevent its propagation. Even if it is of domestic origin, it is important to investigate its causes — How important that circumspection & decision should mark the conduct of the physician! Instead of first spreading an unnecessary alarm by publicly announcing the first case he may meet with, let him place the responsibility on the board of health. You can have no idea of the affecting scenes which result from the presence of yellow fever in a large city. There is an unusual alarm among the inhabitants, & the whole town exhibits an appearance entirely different from what we usually observe. I myself have witnessed the day, when the streets of Philadelphia have been at noon as silent as at midnight; when the

hum of business, the sound of footsteps, & the noisy rattling of pleasure carriages, have been entirely suspended, & scarcely any sound was heard, except such as proceeded from the sick-cart & the hearse. Many a time has our city been clothed in sackcloth & mourning. Hence, it becomes of vast importance, that we should investigate the causes of the disease, & thus be enabled to use the means which a Beneficent Providence may have placed in our hands to prevent its occurrence, & to oppose its propagation.

This disease, as is common with all fevers, has a cold stage, either exhibited in a distinct chill, or in that rigour or sense of chilliness which ushers in febrile diseases. After this, reaction of the system generally occurs, though not in all instances, & a fever is fully developed. It may be divided into three grades; as may be seen in families and hospitals — the mild, the severe, & the disorganizing, or those, they begin to die from the onset of the disease. At this early stage of the business, we find such symptoms as usually characterize fevers; viz. the hot & dry skin, great restlessness, pain in the head, &c. But generally speaking, the eye of the practitioner, accustomed to the disease, early recognizes a peculiar, & I believe I may say, an indescribable expression of countenance which he may perfectly understand, but will scarcely be able to explain — a certain malignant aspect, a livid hue of the countenance accompanies these cases, which is seldom met with in other complaints.

The reaction of the system is sometimes so considerable as to call for the lancet. Evacuations at this period of the disease are, in many cases, useful, with the exception of one mode which is common in other complaints of a febrile character: I allude to the evacuation by emetics. I believe that among the contentions which took place among medical men, not only as to the cause, but also as to the mode of treatment, a very little experience united them in one point, viz. that emetics are improper in yellow fever. I shall, in another part of the lectures, treat of the particular remedies adapted to this stage of the disease, into a detail of which, I cannot afford time to enter, at present. The yellow fever is, I think, less liable to remissions, & takes on more of the continued form than our common remittents. The patient is frequently in a state of continued fever for three days. About this time a change often occurs which is very deceptive to a young practitioner, or one unacquainted with the disease. He will visit his patient & find the fever subdued, the skin cool, & the sick person free from pain & in a very composed state. Even if he feel the pulse, he will, in some instances, find it to possess very much of the natural character. He will be inclined to think that every thing is going on well, & that a delightful remission has occurred. Perhaps the only uneasiness which the patient experiences, is a slight sense of weight about the stomach. But the experienced practitioner sees the disease making its ravages on the system, & apprehends that fatal consequences are

at hand. About this period a yellowness of the skin often makes its appearance. A dark orange yellow spreads over the whole body, but is particularly observable in the eyes, face, & about the neck & breast. If we make the smallest pressure on the epigastric region, we may now understand at once, the danger & seat of the mischief. It often happens that a slight pressure with the hand over the stomach, makes the patient almost scream with pain; and it was as much the custom to press on this part, to ascertain the degree of tenderness, as it was to feel the pulse of the patient. Such was our uniform practice at the Hospital; & a patient, I believe, never entered without being subjected to this test. But I have seen some cases, even with black vomit, without any peculiar tenderness on pressure.

Hitherto the patient has been perfectly sensible; without any delirium, & anticipating, perhaps, a speedy restoration to health. But what follows? This deceitful calm soon passes away, & the third stage is ushered in. It is frequently manifested by that most terrific symptom black vomit. The patient begins to throw up a great quantity of black matter resembling coffee grounds. The pulse now sinks; dissolved blood oozes from the gums, the tongue, the kidneys by urine, & from blistered surfaces. For a day or two before death, there is often a total absence of pulse at the wrist. What is very remarkable, after these terrible symptoms have been fully developed, we observe, in many in-

stances, a perfect clearness of intellect. I have witnessed some affecting scenes after black vomit has been thrown up, & the patient has been perfectly aware of the consequences. One case in the Hospital affected my feelings very much. The patient was a young widow, (with one child,) the daughter of a baptist clergyman, & had been piously educated. Soon after her admission, she threw up the black vomit. I happened to be in the ward at the time, & heard her exclaim, when she first saw what she had thrown up, "I am gone! I am gone! – Doctor, pray for me." She was perfectly aware of the consequences, & from that moment expected, with composure, the fate that awaited her. She wished to make her will, & requested me to write it for her. I sat on the bed side & wrote while she dictated with as much clearness, as if she had been in a state of perfect health. – I recollect another case: A man whose whole family was brought with him to the Hospital, & whose wife was in another ward, was seized with fatal symptoms. While in the dying state, he conversed with me freely, & seemed perfectly aware of his situation. One question which he asked me I shall always remember: – "Doctor, are you married?" When I answered in the negative, – he said, "If then you should be taken away, you will have less to trouble you, than one who is about to leave behind him a wife & six helpless children." – Another man only a few hours before his death requested me to write his will. I

did so. It was about 12 o' clock at night; & before morning he was dead. - To show the clearness of intellect which was often observable in the last stage, I will mention, that this patient informed me the exact sum which he owed at a boarding house in this city; & having some money in his pockets, called for his clothes, counted out the sum, & requested the person who settled his affairs to be informed that he owed so much, & no more. This clearness of mind did not, however, occur in all cases.

Some patients died without either hemorrhage or black vomit. I briefly hinted, when speaking of the walking cases, that these were among the fatal instances of yellow fever, occurring without the symptoms just mentioned. Yet we find in these cases, a set of symptoms well understood, & generally regarded as fatal. If a patient presented himself to a physician accustomed to yellow fever, with a malignant countenance, a fiery red eye, & a throat somewhat sore; if upon examination he was found to pass no urine, the case was considered as certainly settled as if the patient were dead in his coffin; although he might have been walking about at the very same time. I witnessed the case of a man, lately arrived from New-York, who was exceedingly offended at being placed in the hospital & regarded as a sick man, when he considered himself perfectly well. But as we expected, so it happened - he

died in a short time. Another case occurred with the same train of symptoms, or, at least, an extremely malignant countenance & a deficiency in the secretion of urine. This man died in 48 hours. He perspired most profusely; & this, as I have before stated, instead of being salutary in the last stage of fevers, is often indicative of a fatal termination. Some cases of yellow fever were marked with the most profuse sweats, so that the patient appeared as if he had been in a bath; but these cases were not common.

I have seen a patient brought to the Hospital, able to walk about, with his face perfectly purple. There was that kind of death in the extreme vessels, that allowed the dissolved blood to stagnate in their cavities; & the countenance presented an appearance, than which nothing can be conceived more awful. He died in a very short time.

In fatal cases of yellow fever, (as it was found upon dissection,) the stomach exhibited marks of very considerable inflammation. Some patients were affected with coma from the very commencement. When the disease first approached, they fell into a state of lethargy, & slept away life without any suffering, or consciousness of their situation.

I have before mentioned, that, in some cases, we met with a natural tongue & natural pulse, & quoted to you the expression of Dr. Rush, - "Beware of the natural tongue & natural pulse". In these cases, although the tongue & pulse are natural, yet the countenance, that certain index to an experienced physician, discovers to one accustomed to the disease,

that great danger is to be apprehended – they generally prove fatal.

Many patients, as I before observed, retain their intellects unclouded till the last moment: but this is not the case with all; I have observed the most distressing delirium through the whole period of the complaint, particularly in the last stage. I remember the case of a Danish sailor – a strong, athletic, & muscular man who, in the dying condition, afforded the most distressing spectacle of furious delirium: he rolled & tossed himself about, raved incessantly, used the most violent muscular exertions, & seemed to resist death with the severest struggles. For his own sake, & for the sake of the sick by whom he was surrounded, it was necessary, however unpleasant the expedient, to resort to the strait jacket; & thus confined, he was carried into one of the out-houses while on the very point of dying.

To give you some idea of the appearances of yellow fever as they presented themselves in this city, I will state a case which I witnessed while a student of Dr. Wistar. The patient was a young man in Greenleaf's Alley. Dr. Wistar attended him through his disease; &, on the night of his death, I went to see him with the Dr. His head had been shaved & covered with a blister; he was in bed, & dissolved blood was oozing from his gums & nostrils. Directly opposite to the bed, the wall was smeared with blood & discoloured saliva which he spit against it. He

was steadily delirious, & his delirium was accompanied with risus sardonicus, that grinning, horrible laugh which constitutes the most distressing expression of which the countenance is susceptible. To crown the whole, there was a black nurse in the room, his only attendant, who, to avoid the danger of infection, had muffled up her mouth with a dirty towel. I recollect that the impression made on me by the spectacle was a strong one. The patient died before morning.

I have spoken of the walking cases as constituting a marked line of distinction between bilious & yellow fever. These cases, when the patients were without pulse, were almost invariably fatal: yet one instance of recovery fell under my notice at the Hospital; &, as it is interesting, I will relate it. The patient was a female. At the time of her admission several other patients were brought in. One in particular was extremely ill: & both the nurses & myself were engaged in giving our attention to this one, when the woman alluded to came up into the room. I turned round, put my hand on her wrist, & found her without pulse: but as she appeared strong, & did not seem to require immediate attention, I requested her to sit down till I should have finished what was requisite for the other. After a little while, looking round, I found the patient gone. She had been alarmed by the spectacle of the sick & dying, & had made her escape as rapidly as she was able. I despatched some nurses after her, who brought her back. She

was perfectly pulseless. We placed her on a bed, & resorted to the proper treatment. But she resisted every thing that was done for her.- She was an Irish Roman Catholic. She fought & swore, & the nurses could do nothing with her. Under these circumstances we resorted to a catholic priest who daily attended the Hospital, & stating the case to him, assured him that every thing depended upon the diligent use of stimulants, particularly wine. He told us in a tone of great confidence that he would make her take it. At our desire he spoke to the patient, & I remember his words - "Hut! woman, the Dr. tells me you wont drink the wine - wont you drink it? Tis no sin to drink now - wont you drink it?" "Yes," she replied; & there was no difficulty afterward. This was the only instance of recovery where the pulse was absent.

I have not yet said much of the particular kinds of pulse in this disease. In the early stage, as I have before remarked, it is sometimes proper to employ the lancet. But I wish to guard you against a particular form of pulse, which is ocasionally met with in yellow fever. It was denominated by Dr Rush, the gaseous pulse. I recollect one of the first cases which fell under my notice, as it made a strong impression on my mind. The patient was a young man, & was not very far in the disease. His pulse bounded, apparently, with great violence, & gave me the idea that the artery was twice the natural diameter. The first im-

pression from feeling the pulse was, that there existed violent, inflammatory action. But with the slightest pressure, it passed away under the fingers like a bubble of air. This pulse is, in general, a very bad one. In one instance I took away a few ounces of blood; but the patient was soon disposed to faint, & finally died with black vomit. The blood that is drawn from the arm in this complaint is occasionally dissolved. It is like tar, & its power of coagulation is lost.

I have been struck with the remarkable alternation between the brain & the stomach, which sometimes occurs in yellow fever. I have seen patients with black vomit, & that of some continuance, suddenly relieved from this symptom by the supervention of coma, & these circumstances often alternate with each other. Sometimes there is coma & a quiescent stomach; at others, the head is sound & the stomach irritable; & sometimes, (strange to tell,) even after the appearance of black vomit, the patient manifests a disposition for food. One of our patients of this description, sat on the side of his bed, devouring the leg of a chicken.

Black vomit is unattended, in many patients, with nausea – They have acid eructations. Violent convulsions sometimes attend the last stage of yellow fever.

Much has been said of black vomit, & much deserves to be said; because it is one of the most stri-

king symptoms, after the appearance of which, the patient rarely, if ever, recovers. I have heard of recovery from black vomit, but have never seen one; with the exception, perhaps, of the case of the little child where the flocculent appearance of black vomit was once seen with the fluids ejected from the stomach. But I hardly consider this as an instance of black vomit. I once saw a case which appeared likely to recover, & I was almost induced to believe that my previous views were not correct. The patient was put into a hot bath. The water was not merely warm, so as to relax him, but hot for the purpose of stimulating. It had a very good effect, & for the first day or two, the symptoms were flattering. The pulse which before was hardly perceptible, now became full & comparatively strong: but there was great tumefaction about the throat, somewhat like carbuncles in the plague; & it seemed that the mechanical pressure had something to do with the death of the patient. I had some idea of opening the wind pipe: but considering all the circumstances, & among others, the number of persons among whom it must have been resorted to, & on whom it might have produced some bad effect, I declined performing the operation.

There have been many speculations as to the nature of black vomit. My opinion is, that it is nothing more nor less than dissolved blood, cast out from

the arteries of the stomach. (For further information respecting my views of this subject, I refer you to a piece published in Coxe's Medical Museum, in 1806 or 7.) At the same time that I make this observation, I reserve the liberty to state, that there are appearances in the stomach resembling those in malignant fever, without any previous inflammation. Hence it follows, that deductions from the state of the stomach after death, are sometimes very uncertain.

It now remains for me to enter upon the practice which was pursued in the treatment of yellow fever.— But before I engage in this part of the lecture, I consider it proper to detain you a little while in making a few observations on a very important subject; & that is relative to a law which governs fevers in general: whether the various diseases of this kind which affect the human frame, are to be subdued by active & powerful treatment, or whether they will run a determined course. I believe that this is worthy of deep consideration; because, according to the opinion you form, your future practice will be regulated. It is a maxim which you will often hear, that violent diseases require violent remedies. As it applies to some maladies which affect the human body, I subscribe to its correctness; but so far as it relates to yellow fever, I am thorough-

ly inclined to believe, that violent practice is of serious injury. Believing, as I do, that yellow fever, in common with other diseases of the same class, possesses a specific character, & runs a determined course, my object is, not at once to strangle it by powerful practice, but to endeavour by judicious measures, to conduct it to a favourable crisis. Let us now view the practice of a man who believes that the complaint is to be subdued by active treatment: supposing the disease to be violent, his remedies will be of the most active kind; believing that great disorganization will result, if the force of the fever be not lessened by powerful depletion, he will unsheath the lancet with the utmost boldness, & draw away blood in enormous quantities. He will also deplete from the bowels, and use other active measures to subdue the fever. But recollect that he has to contend with a disease strongly disposed to run into a low form, & that if he endeavour to subdue or cut it short, instead of relieving the complaint, he will conduct it more rapidly into this condition. I therefore consider such views & such practice hazzardous to the patient, not only in yellow fever, but also in all other fevers which have fallen under my observation. The doctrine of subduing fever by violent practice is, in my apprehension, a dangerous doctrine. In pursuance of these views, it has happened, that even the common remittents of our country, have been sub-

jected to the most powerful treatment. The consequence has been, that many cases which, if left to nature alone, would have terminated favourably, have become unmanageable. I entered the city Hospital under the full impression of the correctness of suffocated excitement. I believed that yellow fever was a disease of suffocated excitement in which the system was rendered prostrate by violent action; & that, to bring the patient out of this condition, powerful depletion was necessary: I was even afraid of depleting too sparingly: for I had been taught, in those days of theory, that if I were to open a vein & take away only a small quantity of blood, it would be worse than nothing. I should merely open the cage of the tiger, & give him liberty to spread havoc around him. I was, therefore, cautious against small depletion, believing it would let the system loose, & be productive of still greater disorganization. A little experience soon taught me that these views were incorrect, & instead of the generally prevailing doctrine, that disease was a unit; that all complaints were one & the same thing, differing only as they happened to be in different parts of the system. I was at length forced to believe that many of them possessed a specific character, & were to be treated by remedies adapted to their particular condition. I am aware that there are exceptions: but I fully believe in the doctrine of specific action. Thus a practitioner according to the views which were formerly in vogue, would say that every case of inflammation must be dub-

dued by the lancet. But every experienced physician will acknowledge, that there are cases where the lancet does no good, & is even injurious. I will call your attention to anthrax. The inflammation, in these cases, is discovered by our organs of vision; it is proclaimed by the sensations & sufferings of the patient. Yet, if we undertake to relieve it by the free use of the lancet, we shall incur great danger; whereas, by an opposite course of treatment, the inflammation may frequently be made to give way. I have thus laid before you some general views, preparatory to my entering on the treatment of yellow fever.

Practitioners have differed essentially in the treatment of this disease. Some of them, according to the impression, that violent complaints require violent remedies, tested their opinions by their practice. In the first place, as I before hinted, all seemed to agree that emetics should be laid aside. In the common fevers of our country, these were often resorted to before the year '93. But for some years afterwards, so great was the aversion to this remedy, that it was scarcely ever employed in the ordinary bilious diseases. But the lancet was strongly recommended, & was resorted to most powerfully. So far as I can ascertain, the disease appears to have assumed different characters in different years. It is certain that in some seasons it bore the loss of blood better than in others. In the years '93 & '98, the practice of bloodletting

obtained to a considerable extent. But in some of the subsequent years, Dr. Rush found it necessary to be more cautious in the use of the lancet. He declared his belief that the disease had changed its type. He said that in the early stage, he found some moisture on the skin; & hence, nature clearly indicated the propriety of producing perspiration: consequently, he bled less and sweat more. This was his practice in one or two of the last years. At the city Hospital, when the patient came in, in the early stage of the complaint, we commenced, in some cases, with the use of the lancet: but experience soon convinced us that the disease would not well bear bleeding: hence, in a large proportion of cases, it was seldom, in many not at all, resorted to.

Upon the principle that violent diseases require violent remedies, mercury, that Sampson of medicine, was brought into action against the destroyer. This remedy had many advocates, & was used with a liberal hand. So far as my experience went, I had no reason to be partial to the medicine, when used so as to affect the whole system. While I was a student of Dr. Wistar, I had an opportunity of seeing his practice in this disease. He was an advocate for mercury, & used it very liberally. He employed it in almost every stage; but I must say, that his success in the treatment of yellow fever by mercury, was far less than in other diseases which he was accustomed to manage. I had, therefore, no reason to be encouraged with

the remedy. Dr. S.P. Griffitts used mercury on a plan more accordant to my views. Instead of applying it indiscriminately to every stage, he confined it to the first. It was his practice to commence at once with the use of calomel, of which he gave one grain every two or three hours, steadily, through the night & day. If it purged a little he had no objection. He went on in this way through the inflammatory stage. He has repeatedly said that he would not dare to give a particle of mercury after the third day. By this time he charged the system; & if inflammatory symptoms ran high, he resorted to the lancet. After this he purged with a decoction of senna; & his practice, I think, was more successful than Dr. Wistar's. The moderate use of the lancet was occasionally admissible, &, in a few instances, when the head was affected, & the pulse tense & contracted, it proved of some service. Cupping was also employed with advantage in local affections. But the practice at the Hospital was principally of this kind: When the patient was admitted in the early stage, we were disposed to evacuate the bowels very liberally, & also to induce free perspiration: We sometimes used mercurial purges; but were generally content with milder articles, as jalap, cream of tartar, castor oil, phosphate of soda, & others of a like nature. The warm bath was a common & useful remedy. After this we were in the habit of giving drinks to promote perspiration. The decoction eupatorium perfo-

hatum, or, as it was commonly called, bone-set tea, with warm lemonade, were commonly employed; & the patient was advised to drink of them freely. Among the remedies useful in this stage to produce sweat, & to compose the stomach, we thought highly of the saline draught given in the state of effervescence. If lemons or limes could not be procured, we were content with vinegar. This draught was highly calculated to compose the stomach, allay irritation, & produce perspiration. The antimonial preparations, so commonly used in our remittent fevers, were inadmissible in yellow fever. Sometimes however, it would happen that the patient could not sweat: the skin would be hot & dry, & all our attempts to produce perspiration would be abortive. Endeavouring to excite it by warm drinks, & by heaping on the bed-clothes, was productive of more harm than good - What, therefore, must be done? We resorted to that most excellent practice, recommended by Dr. Currie of Liverpool, - using cold ablutions & cold drinks. I have often noticed patients asking for cold water, cold water; & I have always answered, take & drink. The aversion to cold water & air, formerly existing, was not only irrational, but productive of much suffering to the patient. What is more natural than the practice of giving cold water in fevers? The patient parched by the heat, longs for it as if he were in the deserts of Arabia. Cold ablution is also an excellent remedy in yellow fever: it lessens the distressing heat of the skin, & diminishes the fever, with-

out reducing the general strength. We were much in the habit of using it, & reaped considerable benefit. Through every stage of the disease, we attended to the state of the bowels; even after black vomit had begun to appear. Sometimes evacuations were procured by gentle cathartics, sometimes by injections, & frequently with advantage. In fact, in the year 1805, purges were much employed, & with considerable success. At the same time, we kept in view the strength of the patient, and therefore never employed the drastic purges. Blisters were much resorted to, & I thought with great advantage. The place which we considered as peculiarly proper for a blister, was immediately over the stomach. We knew the tendency of the disease to this organ, & it was there that we were to expect the principal mischief. It became the universal practice in the Hospital, not to wait till we should discover serious symptoms of disorder in the stomach; but to anticipate the disease by the application of a large blister over the part. This practice was, I believe, beneficial. We were not then so well acquainted, as we since have become, with the advantage of stimulating applications, (especially Dr. Hartshorne's decoction,) to the surface of the body. In cases which came within the reach of treatment, after the patient had got into a low state, there was great necessity for supporting the system through the remainder of the disease. By a neglect of this caution, many patients were lost, if I may use the expres-

sion, in the arms of victory. After the violence of the disease was past, the patient was occasionally left in a state of extreme debility, & life was supported only by the most assiduous care. Hence this was one of the most important periods in the complaint. I often observed that patients who were admitted into the Hospital in the last stage, & had previously received no medical attention, did as well, & some of them better, than those for whom a great deal had been done. The time when they required most attention was when they had passed into the low condition.

Situated as I was, with the prevailing theories impressed on my mind, I had a dread of stimulating treatment. My ideas were constantly running on excitement of the brain, & I was in continual fear of effusion or disorganization. But, happily, there attended in the Hospital with me, an old gentleman, Dr. Samuel Duffield, who, though no theorist, had much experience. He & Dr. Church were the attending physicians. I recollect the case of a man, in which the stimulating plan was first tried, & in which it proved successful. The situation of the patient had become very serious, & much apprehension was entertained as to the issue. Dr. Duffield proposed that we should enter at once on the use of wine. I made the observation, – May-be there is too much action for this remedy? The old gentleman answered, "May-be the sky will tumble down –

give him wine." We did so, & he recovered. We were afterward much in the habit of using wine & cordial medicines. Bark never held a distinguished place in the treatment of yellow fever.

I often felt extremely anxious for the patients labouring under great debility in the wards of the Hospital. The nurses could scarcely yield the proper attention: hence I had to watch by night & by day: & if more success was experienced in that year, it may principally be attributed to the great care that was taken in nursing. Late at night I would frequently walk through the wards with the nurses, & point out to them such patients as I thought demanded the most assiduous attention. These I directed them to watch carefully; and warned them, that, unless our directions were punctually attended to, the patients would probably be found dead in the morning. If I found the nurses neglected their duty, they were watched closely; & if they still persisted in their carelessness, they were dismissed. Often I have gone my round & retired as if to bed; but in a short time returned silently & unawares to the ward. Sometimes I have found the nurses asleep. At length, however, by constant attention, we established a system of good nursing, to which many cures must be attributed.

But the great difficulty, in many cases, was, that the stomach was excessively irritable – rejecting every thing which was offered. By this circumstance, we were often foiled in our treatment. At the very time that it was necessa-

cy to support the system, the agent by which this was to be accomplished refused its office, & the patient sunk into a very low state of debility. Among the remedies employed to allay this irritability of the stomach was lime water & milk. A table spoonful of each of these often remained when other things were rejected. Various other plans were resorted to. The hot bath was employed in some cases; & in one was attended with the effect of allaying irritation & improving the pulse. On the recommendation of Dr. Physick, we also employed the spirits of turpentine. He proposed it from the idea that the action in the stomach was of a peculiar nature; &, if we could substitute a new inflammation by means of the turpentine, we should be likely to relieve the pre-existing disease. One, & even two tea spoonsful were given at a time; but we did not meet with much encouragement to persevere. But though taken into the stomach, this remedy proved of little use; yet in the form of injection, given till it produced strangury, I thought it beneficial. We administered it in larger doses than those in which it is now prescribed; & perhaps it might have proved useful, if it had been properly regulated.

Typhus Fever.

I propose to deliver some observations on malignant typhus fever. Typhus fever, in the general acceptation of the term, is very indefinite: because the term typhus may be applied to almost all low forms of disease. Thus, a fever in its commencement may be highly inflammatory; but in its progress the patient may become weak & exhausted; & before he dies the fever may receive the name – typhus. But I wish it to be understood that this condition of the system, which may be induced by a variety of causes, is not that of which I am about to treat. I am about to speak of a disease of a specific nature, to which the name of typhus fever has been applied, & in which, however contrary the opinion may be to the systems of the day, there is, ab initio, a reduction of the vital powers of the system.

This complaint which has produced a vast deal of mischief in our country, first appeared under the name of spotted fever, in the North & East. We heard of it in New England several years before it appeared in our borders. – The present course of lectures I wish to be practical; I shall not, therefore, speak of what I have heard or read, but of what I myself have witnessed.

I will now simply narrate my first acquaintance with the disease, as it occurred in the neighbourhood of Philadelphia. In the winter of 1812-13, the practitioners of

of this city had their attention called to a violent complaint which was raging in Camden, a village on the opposite side of the river. We heard of several deaths. An opportunity soon presented to me of inquiring into the appearance & nature of the disease. I was called into Camden to visit Samuel Poole. Here I met with Dr. Hindey, a very respectable practitioner, who had seen many patients. He said that it was a very inflammatory disease; that some persons were affected with phrenitis, some with pneumonia; & in fine, that it put on the forms of all the different phlegmasia. He also said that the blood was very sizy. Poole was the first patient I saw with the disease; & the case occurred in the first month of the year 1813. The patient had been ill several days before I saw him. As soon as I entered the room I was struck with the malignant aspect presented by the patient. Accustomed, as I had been, in yellow fever & other malignant complaints, to observe the peculiar expression of the countenance, I could not fail to have my attention arrested by the view presented to me. Before I saw him he had been twice bled. In consequence of severe erratic pains in his limbs, it was supposed that he was affected with something like inflammatory rheumatism. He died on the 7th day of his illness.

On the 21st of the same month, I was sent for to see Sarah Poole, widow of Samuel, nine days after her husband's death. This case I had an opportunity of seeing from the very commencement. I was informed by the

messenger, than the patient was affected with quincy, a disease to which she had been very subject. When I entered the room I found that she had been attacked with a chill. She complained of some soreness of the throat, & supposed that she was seized with her old complaint, the quincy. Upon examination I found an erypipelatous inflammation of the fauces, but nothing which bore any resemblance to the true cynanche tonsillaris. I placed my fingers upon the wrist, & instead of the active pulse of quincy, I found a very feeble irritated one, which yielded directly to the slightest pressure. The eye was of a dingy cast; & I thought I recognized at once, from what I had seen in the case of her husband, a disease of a low grade & malignant character.

The treatment hitherto pursued, had in 7 cases, terminated in death. The same plan had been followed by the most respectable practitioners, wherever the disease first appeared, & it is very probable that I should myself have adopted it, had I not already taken the alarm. The treatment had been adapted to an inflammatory condition of the system, & seemed to be justified by the sizy appearance of the blood. The doctrine of suffocated excitement had, in many neighbourhoods, considerable influence in determining this practice. With the view of the case which I had taken, I determined to pursue an opposite course from that which had hitherto been adopted. My practice was founded on the belief, that the disease was

of a low grade, & should be treated, not with depleting, but with supporting measures. The patient recovered.

Soon after this, in the same village, a fresh crop of cases sprung up. The new plan of treatment which had been adopted, was followed by a very satisfactory change in the results; & the inhabitants, instead of being impressed, as hitherto, with the conviction that every one attacked with the complaint must die, were rejoiced to find a number recovered under a different mode of practice.

Soon after the disease occurred in Camden, it appeared also in Philadelphia; & what is very remarkable, I first observed it at the water's edge. One of the first cases which I saw in this city, was in water street, between Market & Arch. The patient was attacked on the 15th of the month, & in the morning of the 16th, I was called to see him; about 12 hours after he was first taken. The disease passed up from water street, & many cases occurred in the neighbourhood of, & along, Arch Street. Almost the only instance, if not the only one, of this complaint which Dr. Rush ever met with, he saw with me, at a less distance than a square from my present dwelling house. It was but a short time before his death; & I think it probable that he contracted from this patient, the disease of which he died. The case was a malignant one. When the Dr. entered the room, he appeared surprised; & after we went out to consult he made use of these very words: "Doctor, what can this mean? What is it? It looks as if we should have

petechiæ". He prescribed for a low form of disease; & soon after was attacked with the complaint himself, which terminated his valuable life.

Not only did this fever occur in the immediate neighbourhood of the city: but it also appeared in the most healthy situations, particularly in one to the northward of Philadelphia. At some distance above Frankford, the family of -- Sholcross was attacked, & I was called to see them, month 2nd, 1813. When I saw them, three persons had died & two lay very ill. In this place I had one of the most unpleasant differences which ever occurred to me, with a practitioner who was also attending the family. He declared that the disease was of a violent inflammatory character, & that the lancet should be employed. I conscientiously resisted his opinion, & he retired from the responsibility of attendance. There were two more physicians engaged, one of whom had never attended before in the disease, & the other had seen very little of it. They yielded to my judgement, & thus I had to sustain the whole weight of responsibility. The eyes of all the country were upon me, & you cannot conceive the anxiety I experienced. Happily, however, both the patients, a father & his only son, recovered. From this time until warm weather fairly set in, many cases of malignant typhus fever occurred, & a number of our most respectable & distinguished citizens fell victims to its violence.

It seemed to be the character of this complaint, in

many instances, to produce a very great prostration of the powers of the system. When the patient was taken with the chill, or continued in the cold stage, he sunk into a state of extreme debility, & in some instances reaction occurred very slowly; in others, not at all. Persons who had previously debilitated by disease or intemperance, were particularly liable to the fatal effects of the malady; & in some of these the system was so completely prostrated that it could never be made to rise. When called to see a patient in this condition, we found the extremities cold; the countenance, shrunk; the pulse feeble, &, in some instances, absent; & generally the most distressing retching to vomit, together with insatiable thirst. In some of the low cases of typhus fever, we occasionally found a degree of thirst which nothing could allay; & that is very remarkable, & worthy of recollection, as soon as we could bring about heat in the skin & action of the pulse, we observed a decline of the thirst; & this decline was in direct proportion to the elevation of the system.

I will here pause to remark, that excessive thirst comes in two opposite conditions of the system. In fevers of high excitement, we may often find a strong desire for drink; but a thirst of a more distressing kind, & altogether insatiable, arises from a condition of the system, in which the blood is not propelled into the extreme vessels. These, denied their usual supply, create the sense of thirst which I have mentioned.

Delirium often occurred in the early stage, & it was

much less to be dreaded then, than when it did not appear till late in the complaint. I recollect the instance of a young man, a son of Samuel Archer, who was attacked with headach in the city, & rode out with his father to their country seat. When he arrived, & had stept out of the carriage, he was seized with the most violent delirium, amounting almost to phrenzy. The family was greatly alarmed, & despatched the coachman immediately to the city. Happily, I was at home, & was enabled to obey the message without delay. I found the patient with a feeble pulse & violent delirium. By immersion of the feet in warm water, the application of sinapisms & proper internal treatment, the pulse was elevated & the delirium subsided. He finally recovered. This is one state of delirium which occurred in typhus fever. I have seen two instances where the patients were absolutely affected with mania. Of these one died; the other recovered. The mania was distressing; because they not only showed ill-will toward the people around them, but also a disposition to snap at & bite their attendants.

Other patients were affected with erratic pains in their trunk & limbs. These cases seemed to counterfeit inflammation, but there was a marked difference observable. We are not apt to find a limb in inflammation affected but for a short time. There is always a degree of permanancy attending this affection; whereas, the pains alluded to were transient, & passed from one part of the body to

another like shocks of electricity. Another form of the disease, & one common in some neighbourhoods more than in others, was that of pneumonia. Pneumonia typhoides was a name which obtained very often, & some practitioners thought that the disease seldom if ever occurred in any other form. So far as I can judge from my notes, of those patients whom I saw in the year 1813, not more than one third were affected with pulmonic symptoms. In those cases where these symptoms prevailed, there was generally pain in the chest; sometimes on one side & sometimes on the other. In addition to the pain dyspnœa frequently occurred; & what might almost as characteristic of the disease, dark, bloody expectoration was observable. Sometimes the matter discharged was not pure blood, but a peculiar secretion of a dark orange colour. On other occasions it was nothing but very dark blood. I remarked that whenever the expectoration was free, the danger was less; when the dyspnœa was constant & expectoration slight, the danger was very great. The pneumonic was certainly, in many instances, a very terrific form of the disease, as the lungs which are a very vital part, were liable to be disorganized. But, as I shall endeavour to show, disorganization of the lungs did not arise from excessive action, but depended on a want of vital power; & hence these organs were inundated & engorged, & the patient experienced the utmost distress.

Diarrhœa was an occasional attendant. This symptom I regarded as dangerous; & I have seen it reduce the system so low that nothing could raise it. One of the first patients which Dr. Physick saw with this complaint was in consultation with me. He was a man at Wicoff's in Market Street. He was extremely low, & the plan of treatment was vigorous. When the Dr. was called in consultation, my feelings were peculiarly distressing. Having had an opportunity of forming my opinion relative to the disease; having seen similar instances in Camden, & thinking myself somewhat acquainted with its character, I had formed my judgement, & could not conscientiously yield it up. At the same time, I was afraid that Dr. Physick would adopt the idea, that the strength was to be saved not by stimulating, but by depleting, measures. With my mind thus determined, & with such fears, you may judge how extremely unpleasant were my feelings, as we sat by the bed-side of the patient. But, happily, his judgment coincided with mine. He examined the case most carefully, & when we left the room, he told me that his first impression on seeing the patient, was, that it would be necessary to use depletion; but he soon found that this would not do, & cordially united with me in the plan of treatment, I had adopted. The patient recovered. The occurrence of diarrhœa in certain forms of disease, particularly when pulmonary symptoms existed, was not altogether new to me. A long course of practice in

the Philadelphia Dispensary, among persons in the lowest situations in life, had taught me to know that spontaneous diarrhœa, in the early stage of pulmonary affections, is a dangerous symptom. Cullen has hinted at it. I know it to be the case.

Cholera was another form in which the complaint appeared in the year 1819. It is not common in the early part of spring to meet with cholera arising from the usual causes; & we had a right to conclude, when we saw several families with three, four, or even more, of its members, all down with vomiting, purging, and a feeble pulse, that this was only the prevailing disease in another form.

I have not yet spoken particularly of the eyes and countenance. There is a peculiar expression in the countenance in a patient affected with malignant fever, which can be better understood than described. In some cases of this disease, as in yellow fever, I have seen the countenance nearly livid, as if oxygenation (decarbonization) of the blood were imperfectly performed.

The extreme torpor of the whole nervous system in some of these cases is remarkable. A want of sensation in the surface of the body is, in some instances, strongly manifested. I have also witnessed a total loss of taste, so that the patient could not distinguish wine from water. I have seen this torpor so great in

the nerves of the skin, that blistered surfaces were insensible to the most stimulating applications. The case of a patient at Woodbury was strikingly illustrative of this fact. She was the wife of Dr. Ayres. I was called in during her illness, & received the following account from her husband. She had been attacked severely & dangerously. The husband devoted himself to his wife for several days; but thinking her better, he ventured to leave her for a little while, & visit his other patients. While he was gone, the nurse & the patient thought proper to procure an evacuation from the bowels by an enema, which was accordingly administered. The exertion which was used, & probably the evacuation which resulted, caused the patient to fall into a severe sinking spell. When the husband returned, he was not a little surprised & alarmed at finding his wife in the utmost danger. She was in a state of almost entire insensibility; & every attempt to rouse her by the usual stimulating measures, entirely failed. The Dr. then took a fire-brand, & applied it to her leg. This excited sensation & called forth expression. But you will be surprised to find that instead of complaining of pain, she rather expressed pleasure at the sensation occasioned by the application. She requested it to be repeated, & this was done several times. Having roused her, in some measure, by this means, he succeeded in getting her system up

by the common remedies. He had applied an infusion of Cayenne pepper over the blistered surfaces, without producing any sensible effect. Half an hour afterward, & subsequent to the use of the fire-brand, she complained of pain & burning. Her recovery was complete.

The pulse in this disease is liable to considerable variation: but its general character is certainly that of rack action. Sometimes, as in yellow fever, the pulse was extremely deceptive. The first impression you would receive was of high arterial action: but on a slight pressure no resistance was afforded. The gaseous, or at least an approach to the gaseous, pulse was very common: but this was not always the case. There were certainly some cases where tension of the pulse was observable; & in another lecture, I ~~propose~~ purpose to consider this subject more particularly. I will here remark that one of the most dangerous pulses in typhus fever, was that in which some tension existed, & which was called by Dr. Rush, the synochula.

The tongue was often moist & nearly natural, as in yellow fever; though generally it was brown & dry, with sordes about the mouth. I was in several instances much deceived with the cleaning of the tongue. You may recollect an observation I made in a previous lecture, - that when the tongue cleans suddenly & smooth, the case may in general be considered as safe, but very protracted. But in typhus fever

I have known the tongue to be moist & disposed to clean; while, in several instances, the disease has been near a fatal termination.

Spontaneous & clammy sweats, in the early, or in any, stage, were unfavourable, as also were involuntary discharges from the bowels. Hemorrhage from the lungs, nose, stomach, & kidneys, was another symptom. Dissolved blood was also effused into the cellular texture, & constituted what are called petechial spots.

The sinking spells, as they are called, of malignant typhus fever, are familiar with every practitioner acquainted with the disease, & are particularly to be guarded against. The patients will lie in bed, apparently with considerable strength; & an indiscreet effort to rise, especially if an evacuation from the bowels accompany it, will sometimes bring on a most alarming syncope. The circulation becomes extremely languid, & the attendants are frightened by the situation of the patient. Considerable muscular exertion should, in this complaint, be particularly guarded against; as there is always a strong tendency to these sinking spells. I once knew an instance of a patient who died in attempting to walk from the bed to the door. He was a poor man; his wife was sick, & there was no one present to assist him. In his effort to walk, he fell down dead in the room. These sinking spells are dangerous in proportion to their duration. Sometimes a little exertion brings on one of

them, which is speedily relieved by the proper remedies. But if they continue long, the danger is always in proportion. Sometimes they assume the intermittent form; & I know two cases where the sinking spells regularly returned, & at length terminated in death.

I will now make some observations on the practice. Before entering, however, on this subject, I will remark in general terms, that every epidemic, when it first appears, presents itself with peculiar varieties of form; & a certain time is required before we can become acquainted with its true character. Such was the case with this disease; & the remark applies more or less to every practitioner who has treated it. Hence, when the typhus fever first appeared; when I witnessed the fatal effects which resulted from the depleting plan, & perceived the tendency in the system to sink; when I compared with this the success which resulted from endeavouring to support the system, I had a great dread of evacuation in any shape: but subsequent experience has taught me, that in some forms of this disease, certain kinds of evacuation are not only safe, but advantageous. I might here with propriety warn you against the doctrine of supposed excitement; but I shall take up the subject in another part, & at present pass on to the practice.

I will now take a case of typhus fever in its common form, & suppose it to occur in an individual of ordinary health & strength. I will suppose that after the rigour or

cold stage is over; that the system possesses sufficient energy to react; & that the febrile stage is completely evolved. Under such circumstances, what is to be done? With my present experience, I should say at once, that the first passages must be cleared; & for this purpose an emetic may be administered with very happy effect. I am a strong advocate for the use of emetics in malignant typhus fever, under the circumstances just mentioned. Cathartics & sudorifics are also particularly adapted to the case I have described. Hence, it was my common practice to administer 8 or 10 gr of calomel with from 20 to 30 gr of ipecac; or else to prescribe a drachm of ipecac, to be divided into two doses, one to be given immediately; & if this should not operate in 20 or 30 minutes, the other to be taken. Diluting drinks were also to be used copiously, to assist the operation of the emetic. After this I directed some cathartic, as Lee's pills, or calomel & jalap, to open the bowels & thoroughly cleanse the first passages. Another formula I often resorted to was a combination of the golden sulphur of antimony with calomel & jalap. The proportions were gr x of calomel, gr x of jalap, & gr viij of the golden sulphur of antimony; the whole to be divided into 3 parts, one of which was given every one or two hours. This preparation acts gently on the stomach, with considerable certainty on the bowels, & also produces some tendency to the skin. In addition to this, after the bowels have been thoroughly evacuated, the sudorific plan of treatment is well adapted to the case. With this view I direct

the feet & legs to be immersed in warm water; the patient to be placed in a warm bed, & warm teas administered, particularly the eupatorium perfoliatum, or some other indigenous plant. I also derived great benefit from the saline draught as a sudorific. If limes or lemons are not to be procured, you may substitute the spiritus Mindereri. This may be given in the dose of a table spoonful, if the stomach will bear it, once an hour. It may be diluted with mint water, or some other agreeable addition. Given thus in the early stage, it acts as a gentle & certain sudorific. This kind of evacuation I consider particularly adapted to the early stage, when the disease is not in its most severe & dangerous form.

Recollect that I consider fever as a disease, which, when once completely formed, will run a determined course. If the head is much affected, considerable benefit may be derived from local depletion, particularly from the application of cups to the temples. By the abstraction of blood in this way, the patient is much relieved, & less debility follows than from bleeding at the arm. Cases may arise, when a small quantity of blood may, perhaps, be abstracted from the arm with advantage. But when I consider the nature of the disease, I dare not take away much blood; for I do not believe the mischief is occasioned by excessive action. I had much rather see great action, than a want of action.

Among the local applications particularly proper for

this form of the disease, blisters hold a distinguished rank. When the head is affected, blisters to the back of the neck are very advantageous; & applied to the extremities after suitable evacuation, particularly if the patient is restless, they are productive of considerable benefit. Among the sweating remedies, the Doven's powder deserves particular attention. When the patient is restless & distressed, after the requisite evacuation, 1 gr of opium with 1 or 2 of ipecac, taken at bed-time, will frequently tranquilize the irritability, & dispose to perspiration, especially when combined with the use of warm teas. I can speak with some certainty of the advantage of this medicine. Under this state of things if the case is mild & likely to be conducted to a favourable issue, nothing occurs to call forth great anxiety. But if sweating cannot be induced after a reasonable effort, do not push on with heating practice; but resort to ablutions, &c. as recommended by Dr. Currie.

After two or three days, we sometimes find it necessary to resort to a mild, cordial plan of treatment. In six or seven days, the fever will, most probably, subside, & the patient readily recover. It is very important properly to regulate the cordial treatment of this disease: for, though it may be typhus fever, if the symptoms do not call for stimulant practice, it should be carefully avoided. You should remember that the system has received a blow; that it afterward reacts; & that the practitioner is not to cure it instantly, but to watch and

prescribe for the symptoms. If the patient does not sink, there is no necessity for pouring down wine & brandy: at the same time I wish you to understand that there is a tendency to a low condition, to guard against which your attention should always be directed: for if you do not take care to meet the first appearance of sinking by the proper remedies, the patient may fall into a state of irreparable debility.

Among the remedies particularly proper to meet that state which is midway between excessive action & prostration, the volatile alkali with an infusion of serpentaria is admirably suited. It is a pleasant stimulus, & acts safely when stimulants of any kind are at all proper. It may be given in the form of julap, in doses of a table spoonful, containing 5 or 6 grs of the volatile alkali. It may be taken safely when wine or brandy would be injurious. In this stage of the disease, & in fact in every other stage, I have seen great advantage result from the use of animal diet. This is contrary to the notions which were entertained by the old practitioners. Cullen supposed animal food to be injurious even when it is proper to administer wine. But having experienced many opportunities of testing this point, I can certainly say, that animal soups have, in many instances, produced very happy effects. But all these observations apply to a form of the disease, which may be regarded as the least dangerous — a form which, by improper treatment, may be rendered fatal; but left to itself, may be conducted to a favourable issue.

But what must we do in those cold prostrate cases which I have mentioned? What must we do in those cases in which all the prostration observable during 5 or 6 days of yellow fever, are collected in a few hours in malignant typhus? What must we do where the patient is extremely low, the pulse barely perceptible, the skin cold as death, the stomach excessively irritable, & the distress almost indescribable? Under such circumstances there is certainly no indication for resorting to emetics. It is true that some practitioner in the state of New-York, declares, that in the disease as it fell under his observation, he depended on emetics, & on these alone, in every stage. If the patient was low he gave him an emetic to rouse him from his prostrate condition; if he was in a state of excitement, he administered an emetic to diminish action; & in fact he employed a practice as perfectly empirical as it is possible to conceive - using the same remedy in all cases without any regard to the system of the patient.

In the cases I have just alluded to, you should never use an emetic; so far from it, all your endeavours should be to tranquilize the stomach, to do away restlessness, to restore heat to the surface, & to raise the pulse. To effect these ends various expedients must be resorted to. Reaction is the main object: it is the polar star by which all our measures should be directed. How is this to be brought about? The skin being cold as death, one of the first indications is to apply stimulants to the surface of the body. We should always re-

member that in proportion to the want of action in the skin, is the quantity of stimulant medicine necessary to produce a certain effect; that a pint of wine will do as much in an excited state of the ~~system~~ surface, as a quart when this excitement is wanting, & the skin is cold and insensible. Hence it becomes of great importance to endeavour to excite the surface of the body that we may increase the effect of internal stimulants. Among the measures calculated to meet this indication, several may be strongly recommended. A practice I have adopted, is to wring flannel out of hot brandy or spirits in which Cayenne pepper has been infused; & to apply it as fomentations over the extremities and trunk. I have seen this on some occasions very useful: but I do not wish it ~~to~~ supersede the decoction of cantharides in spts of turpentine, as recommended by Dr. Hartshorn. When, however, you apply this decoction, you should remember not to use it so as to excite very extensive vesication. I have sometimes seen inconveniences arise from large blisters occasioned by this application. Besides in cases where the skin is very cold, it is of great advantage to be able to apply heat: this is more effectually done by wringing out flannels from heated spirits, & placing them hot on different parts of the body. If a hot bath can be procured, it may be useful. North recommends hot blocks of hemlock. I have used hot

bricks, & also hot sand in bags, placed around the patient.

But while our efforts are directed to restore heat to the surface, we may suppose the stomach to be rebellious, & to refuse every thing which is offered to it. What is here to be done? It is very natural to try the effect of opium; but ten to one, it will be thrown up as soon as it is administered. Among the remedies well calculated to meet this indication, I can recommend spiced Madeira wine. This is generally acceptable to an irritable stomach. The spice increases the stimulus of the wine, & renders it more acceptable than it would be alone. But if good wine cannot be procured, or if the patient has been addicted to intemperance, spiced brandy may be substituted. Here it is proper to observe that the stomach is always disposed to act violently if oppressed with great quantities of any article. Hence small quantities of medicine frequently repeated, produce a better effect, & are less liable to irritate, than large doses given at longer intervals. Instead, therefore of giving a whole, or even half, table spoonful of wine at intervals of 15 minutes, it would be better to give only a tea spoonful & repeat it every 5 minutes. When this plan does not succeed in tranquilizing the stomach, stimulant applications should be made over the whole epigastrium. Here sinapisms & blisters present themselves for our choice. We should recollect that blisters are slow in their operation; & though their ultimate effects are very useful, yet these are not produced in time to answer the purpose: sinapisms are, therefore, preferable. But there is one application of which I am particularly fond in these

cases; I allude to the **spiced plaster**. This is made by mixing equal parts of Cayenne pepper, (or black pepper,) ginger, & cloves, (or all-spice,) say two table spoonsful of each, & adding to these some rye meal, honey, & brandy. The whole is then to be heated, & applied immediately on the epigastrium. The effect of this is often very great. But suppose the stomach still to resist every measure resorted to,— what is next to be done? You will then prescribe what experience has proved to be of great advantage, a large anodyne enema. I have seen the stomach reject every thing which was offered, & the patient brought to the very gates of death; & in the ~~same~~ case I have seen the irritability of the stomach soothed, & the patient finally rescued, by an anodyne injection. It is prepared by mixing a tea spoonful of laudanum & about a table spoonful of brandy with a little starch or mucilage. (This is adapted to cases attended with great prostration; in common cases, I do not use the brandy.) After injecting it, it is to be retained by pressure upon the anus.

I have not yet spoken of the particular treatment adapted to the cases of cholera & pneumonia. During the prevalence of the typhus fever I saw several persons in the same family affected severely with cholera. This form of the disease has been particularly noticed by North in his treatise on spotted fever; & the treatment recommended by him is well adapted to the case. He observes that the powerfully stimulant practice, particularly the use of alcoholic

medicines, as ~~wine~~ brandy spirits, &c. ~~are~~ is not well adapted to cholera. So far as my observations have gone, I have found the practice of North correct. Instead of distilled spirits, I have found that good Port wine was admirably adapted to this form of the complaint. At the same time, blisters, anodyne injections, & the spread plaster, should be resorted to. The last of these remedies, applied immediately over the stomach, is particularly well suited to some of these cases. The strength of the patient should be supported by chicken broth, & such like articles.

But the pneumonic form, which is generally termed pneumonia typhoides, is, in many instances, greatly to be dreaded. I have already mentioned the symptoms which characterize the complaint. You may observe dark, bloody sputum thrown up from the lungs, difficult respiration, with pain in some part or other of the chest. The occurrence of pain naturally excites the idea that it is accompanied with inflammation. This often occurs, but not always. Acute pain may exist in a part without inflammation of that part. In pneumonia typhoides, dissection, in some instances, manifests inflammation to a considerable extent: but this inflammation is not of the phlegmonous character - it is specific in its nature; & in its proper place, I intend to speak of it more particularly.

I will now detail the practice which I would recommend to you in the pneumonic cases. If the system has reacted, I would administer an emetic. I think emetics are

particularly serviceable in this form of typhus fever. I have known them to exert considerable influence in removing the pain. At the same time we should clear the bowels by cathartic medicine. If there is much action in the system, perhaps a small quantity of blood may be taken away with advantage. But I would in general prefer local bleeding to venesection. Cupping has several advantages:- it promotes external irritation, abstracts the blood immediately from the part affected, & does it so gradually that the system has time to accommodate itself to the loss. After having evacuated the stomach & bowels, I would recommend the speedy resort to extensive blistering over the affected part, & to the sudorific plan of treatment. Among the remedies best adapted to this form, is a combination of opium & ipecacuanha, administered every four hours, filling up the intervals with diluent drinks. If perspiration be not produced by these measures, the saline draught, or the spiritus mindererii given every hour, may be advantageously added to them. In addition to these I would advise warm applications about the patient. This plan generally succeeds in bringing on a free diaphoresis; & I believe, in the pneumonic form of the disease, is often extremely salutary. If you find that the patient is in a state of considerable debility; if the pulse is languid, & the evidences of prostration very conspicuous, something more will be necessary than herb teas & the Brown's powder. You should then resort to vinous stimulants in some shape, & if the patient has been a hard drinker, even

to brandy. But in my opinion wine, in this disease, is preferable to ardent spirits. Yet there are exceptions to this rule, & among brandy drinkers we are obliged to pursue a different course from that which we follow with the temperate. Wine whey I regard as an excellent preparation. Among the teas or infusions, I should mention that of serpentaria, which is a most valuable medicine in this complaint. Volatile alkali is a remedy from which we may often derive great advantage. Sometimes it may be given in the form of a bolus, in the dose of gr v every hour or two; or in that of julep, if it be more agreeable to the stomach of the patient.

In some of these cases, after the disease has passed the 3rd or 4th day & is verging towards a crisis, very great prostration of strength comes on. The sweating process should have its limits: it may be continued too long, so as to induce great debility & weaken the patient. It is proper, therefore, to keep this in view in the treatment of the disease. Some of you may recollect the case of Joseph Scattergood. In that instance when the patient had gone on very well to the 5th day, extreme debility with a frequent pulse came on. Dr. Griffitts & myself, immediately on perceiving the change, adopted an active plan of stimulating & supporting treatment. We derived great advantage from the use of a strong decoction of bark with the addition of Huxham's tincture, & given in alternation with the volatile alkali. In addition to these, wine & a nutritious diet were resorted to. The anxiety I felt can

scarcely be described. The patient was in the very prime of life, an excellent husband & father, & surrounded by a numerous family. By persisting in the treatment I have mentioned, he happily recovered.

There are some cases of pneumonia which, ab initio, are beyond the reach of medicine. The lungs from the moment of attack are disorganized, & the blow proves fatal. I shall hereafter have occasion to speak more fully on the subject.

I do not know that I need proceed further with the different forms of this disease. But I wish to give you some further views of the practice as applies to the complaint generally. When the patient has passed the first stage of the attack, after the system has reacted, & has again begun to sink into a state of debility; or when it is in a condition in which reaction does not take place, your views should always be directed to support the strength. For this purpose you should resort to stimulant practice. But it is proper for me to remark that the patient may be injured by the improper use of stimulants, as well as by depletion. At the same time I must observe, that some cases of typhus require a quantity of stimulant medicine almost beyond belief. But when the patient is in that state which calls for the constant & vigorous use of such remedies, believing as I do that stimulants are edged tools in the hands of a practitioner, I make it a point never to leave the patient long at a time, without watching the effect of

the medicine. I have generally been able to find judicious nurses with whom I could leave my patients for several ~~days~~ hours. You should use stimulants till you bring the system as nearly as possible to its natural state, & should not urge them beyond this point; remembering always that the quantity of stimulus necessary to effect this restoration of the system to the natural condition, is far greater than what is necessary for retaining it after it has been elevated. Hence, you should endeavour to impress the nurse with this simple truth; that if one pint of wine is necessary to be administered during two hours to raise the system to its natural state, one half the quantity will maintain it there for the same length of time. Another important view is, that stimulants are transient in their operation. They act by producing a momentary excitement. Hence we should have a two-fold object in the treatment of typhus fever: first to rouse the patient from extreme debility by the use of diffusible stimulants, & then to pour in nourishment for the purpose of maintaining strength. A variety of articles may be employed; but none is deserving of a higher rank than the essence of beef. In this preparation we have a concentrated form of animal nourishment. Besides this, calves feet jelly, eggs, with wine or brandy, & oysters, are very serviceable. It is astonishing what a large quantity of oysters has been taken by patients in typhus fever. In a state of very great debility, it is necessary to give something very often; & in some instances I have directed one or two oysters to be swallowed every few minutes.

Among the remedies resorted to in this low state of the system, I have yet to speak of the spirits of turpentine. I consider this remedy admirably well adapted to the prostrated cases of typhus fever; & the more extensive my observations have been, the more reason have I to be partial to the medicine. For, although there are some cases when brandy is administered to a great extent with success; yet feeling as I do, that it is an edged tool, I never resort to it in large quantities, unless the patient is immediately under my own eye. But spirits of turpentine is not liable to this objection. The greatest fault that I can find with it is, that it acts on the bowels if given in considerable quantity. This tendency, however, may be counteracted by the use of opium. I have usually administered the spirits of turpentine in this form:

℞ Ol. Terebinth. - gutt CXX
Pulv. Gum. Arab.
Sacch. Alb. . . aa ʒ ij
Aqua cinnamo. ℥ iv M.

In this mixture there are about fifteen drops of the spirits of turpentine to every table spoonful. This dose may be given every half hour, generally in combination with a few drops of laudanum. In some instances where wine & brandy have failed of producing the desired effect, I have seen the spirits of turpentine act most happily. But cases sometimes occur where the system will not response to vigorous stimulant practice, after several hours

fair trial. This is an important fact. Instead of continuing to drench the patients with stimulants, I would advise you to try some new impression; perhaps an emetic to rouse the stomach, may be useful. I have seen, in the case of a boy, an injection (which produced a free evacuation) followed by a rise of pulse & an increase of strength, when stimulants were laid aside.

Take especial care that you do not confound a state of intoxication with a case of real debility; because, in the state denominated "dead drunk", you frequently have a cool skin & depressed pulse.

I would give you a caution relative to the extensive use of blisters in this complaint. I believe that extensive blistering occasionally produces bad effects: they cause vesication, & keep up a discharge from the skin which tends to exhaust the patient. I have occasionally used them with great advantage, merely as rubefacients. I apply them to some part of the leg & let them remain only till they produce redness: then taking them off, I apply them to some other part. In this way they operate safely; whereas, if they were left till vesication resulted, they would tend greatly to increase the debility.

These may be regarded as general views relative to the disease of which we are treating. There are some other forms which we meet with in practice; but a man who is once accustomed to the complaint, & fairly aware of its invidious & dangerous nature, will soon be able to recognize, & meet with ap-

propriate treatment, all the varieties which may occur. I will again repeat my belief that typhus fever is a disease sui generis, specific in its nature; that even the inflammation which occurs in the course of it differs from common inflammation; that the practitioner should consider, in the treatment of the complaint, that there is great reason to fear want of action, as well as diseased action of a peculiar kind.

When I was treating of yellow fever, I gave you an account of some terrible symptoms which occurred in the last stage of that complaint. Black vomit, hemorrhage from the nose, bowels, &c., blood oozing from the tongue & from blistered surfaces; &, in some instances, though less common than the others, petechial spots made their appearance. In malignant typhus all these effects were generally experienced in an earlier stage than in yellow fever; petechial spots appeared much earlier; dark bloody sputum was, in some instances, coeval with the attack; black vomit occurred, but was not common; bloody urine was not an unfrequent symptom; &, in some instances speedy & fatal disorganization of the lungs took place — the death blow was given at first & the system never reacted. This will happen in some cases under any kind of treatment. Hence then medical men, say that they always succeed in this complaint; that they never lost a patient; that nothing more is necessary to secure the sick than to send for them, — (such men I have heard of,) at least, I call in question their judge-

ment, if not their candour. In those instances where the lungs are speedily disorganized, there is generally great difficulty of breathing, heaving of the shoulders, dark, bloody sputum, &c.; but the expectoration is generally slight. I recollect the case of a young man of intemperate habits, who on his journey from Abington to this city, was attacked with a chill at the Fox-chase Tavern which is about 3 miles from the city. He reached home, however, & the family physician was sent for that evening. Next morning I was called in. The sputum never reached; the lungs are completely engorged, & in a few hours the patient died.

I conceive that this disease anticipates all the violent symptoms of yellow fever, in its last stage, in a most extraordinary manner. To illustrate this statement I will mention the case of a child of Wm. T. Bell of this city. He went out one morning in winter with his mother in a sleigh & took a ride of several miles. On his return he dined with the family; & although appeared a little drooping, yet no alarm was excited. About 8 o'clock in the evening, the child was so poorly that they sent for medical aid. Dr. Wistar was called on; but being unwell, referred them to me. I saw the patient, & found the pulse barely perceptible. There was a disposition to coma, with mild delirium, & a great dread of falling, (which symptom I had often witnessed in cases of typhus fever.) Before 6 o'clock the next morning the child died. The smell of tartar in this instance was so palpable, that the fa-

tient could perceive no difference between pure wine & pure water. When he died he was as spotted as a leopard.

A gentleman was in the habit of going to his store every morning before breakfast. While there he was taken unwell, & with difficulty reached home. His physician, Dr. Dorsey, was requested to see him, which he did early. Some blood was taken, & cathartick medicine administered. That evening at 10 o'clock I was called in consultation; & while I was in the room the patient expired. His countenance exhibited marks of the utmost malignancy, & dissolved blood poured from his nostrils.

In some subjects that we meet with in practice, there is more energy to struggle with the stroke of the disease — the system reacts, & the physician has some chance of prescribing with advantage. I have compared the action of the system with regard to the facility with which it yields to the stroke of disease, & the energy with which it struggles against it, to the multiplied varieties in the human character. Some suddenly bend under affliction, & when any thing untoward has occurred, give up all as lost: others resist misfortune, & struggle manfully to the last. In some families there is great tenacity of life. They withstand shock after shock of disease, & their life is protracted to old age: other families possess less tenacity of life, & yield speedily to morbid impressions.

I have spoken of the disorganization of the lungs in this

disease. I will mention to you some reflections which have occurred to me on this subject. Every practitioner accustomed to mark diseases as they arise, is fully aware of the fact, that determinations to particular parts of the body take place at particular seasons. Thus in hot weather, disease is particularly determined to the stomach & bowels. Hence cholera, dysentery, diarrhoea, are very common in the summer months. There is a strong disposition to disease of the stomach & bowels in consequence of the heat; & hence, when yellow fever appeared, these parts were apt to feel the force of the complaint. In winter & spring the determination is to the thorax; & you are all familiar with colds, pleurisies, &c., which are the diseases of these seasons. When the temperature is reduced, & the weather often changes, the pulmonary system is remarkably apt to suffer. In winter there is a predisposition in this part to be acted on by any general disease. From this we see the reason why typhus pneumonia was so common in the winter & spring. In the affection of the lungs which accompanies this complaint, the dissolved blood percolates through the vessels which are unable to resist it, & give to the part the appearance of inflammation. Look at the red eye in the last stage of cholera:- can this result from excessive ~~inflammation~~ action? In children worn down to the lowest stage of debility, when they are mere skin & bone, & only a day or two before their death, we may often perceive the

red eye, resembling almost precisely a case of acute ophthalmia. When this symptom is perceptible, depend upon it, death is near at hand. The red eye in cholera is a pretty certain token of approaching dissolution. It cannot, therefore, be supposed to be the result of excessive action. The same may be said of the red eye in the advanced stage of typhus fever. By the eye we often judge of the state of the brain. The eye is the window of the brain, by means of which we can judge of the operations that are going on within. Now when we see dissolved blood leaking out into the cellular texture, and forming petechial spots, can we be surprised that the spongy texture of the lungs should particularly invite this kind of diseased action? Hence the fatal disorganization which takes place in these organs; & we may easily believe that the same takes place in the brain. Here an important question presents itself, — How does the blood become dissolved? Is it broken down by excessive action? This is a doctrine believed by many; a doctrine which, when I was a student, was taught from the professorial chair — that the crasis of the blood is broken down, its vital power extinguished by excessive action. Even the appearances in scurvy were said to be from the same cause. I am not an advocate for this doctrine. In practice it is extremely dangerous. That instances may occur of dissolved blood arising from excessive action I readily admit. This is exemplified by the effect of lightning. (I do not think so.) The blood of persons who have been killed by lightning is, we are informed, invariable found to be in a

dissolved state. But I believe that blood may become dissolved by a direct abstraction of vital power. I found my belief, not on theory, but observation. Dr. Wistar & myself attended an old lady, 85 years of age. She was not confined to her bed during our whole attendance; yet in consequence of the effusion of dissolved blood into the cellular texture, she was covered all over with petechial spots. I can scarcely believe that all this mischief was produced by excessive action. It was in fact nothing more than the result of direct debility. Let us look at the causes which operate in the production of scurvy; & then ask whether it is probable that the oozing of blood in this case is the effect of excessive action. We find the disease in ships during a long voyage, where the diet is impoverished, the body confined, & the mind frequently anxious & depressed; we find it also in besieged cities where the same causes operate. What evidence is there that in typhus fever the dissolved blood is the result of excessive action? Do the symptoms warrant the conclusion? Have we the strong, frequent & full pulse of pleurisy & rheumatism, or the slow & laboured pulse of apoplexy? On the contrary, we frequently have the gaseous pulse; sometimes the feeble, creeping pulse, and sometimes no pulse at all. In some instances the synochula pulse of Dr. Rush, which is small, frequent, & tense, may be observed; & if I were called to select a case of difficult management, & one which would most probably terminate fatally, I would select that which is accompanied

with the synochula pulse. We frequently meet with this pulse when the general symptoms indicate extreme danger. I remember noticing it in a patient who was at the time covered with petechial spots; & it continued to the day of his death.

Besides the condition of the pulse in typhus fever, we have other symptoms of debility. Sometimes there is a very cold skin & great want of action in the surface: sometimes the skin is very hot. Let us look at the operation of remedies. In the early stage of pneumonia typhoides, the dark bloody sputum is diminished exactly in proportion to the elevation of the system, produced by stimulants. Would this follow if it were a disease of excessive action? I answer - no. I will mention a case in point.

A gentleman once came under my care in consequence of hemorrhage from the lungs. A large quantity of florid blood was thrown up; but as stop was, after a while, put to the discharge. But before I saw him, he had complained of feeling chilly, & in consequence moved towards the fire, & drank some warm coffee. The hemorrhage was renewed with violence. The pulse was feeble; but the other symptoms imperiously demanded the lancet, & bleeding relieved the patient. Now in this case, the practice proper in typhus fever would have bled the patient to death. What would have been the consequence of giving this man wine whey & volatile alkali, when a little warm coffee & the heat of the fire renewed the hemorrhage? The vessels of the lungs would have exerted themselves so much that

he would probably have bled to death. Contrast this case with those in which a dark bloody sputum is discharged from the mouth. In the latter instance, in proportion as the system is debilitated, the discharge is diminished & the danger lessened: in the former every attempt at stimulation increases the hemorrhage, & the only way to put a stop to it is to depress the system. In hemorrhage from the lungs, as it commonly appears, every practitioner knows that whatever tends to excite the circulation proportionably increases the danger.

Appeal to the practitioners in those neighbourhoods the disease first appeared:- they often viewed it as an inflammatory complaint; but by sad experience were taught to change their opinion. Instances of synchope & death have been known under the use of depleting remedies. But it may be said that dissection unfolds an engorged state of the vessels, & topical inflammation. Little is to be drawn from this. Persons not accustomed to dissection are easily deceived by the gravitation of the blood to the most depending parts. Even in the living state, the blood oozes through the vessels into the cellular texture; & after death it sometimes leaks out entirely, & is found in the lowest part of the body. Witness the case of Dr. Wistar. Upon dissection no blood was found in his vessels; but having leaked from them was diffused into the cellular texture. Hence the inference from the congestion of the vessels, that there must have been increased action, is fallacious. But

the inflammation is entitled to attention. I have, in some instances of typhus fever seen undoubted symptoms of inflammation; I have seen the lungs covered with a membrane of coagulable lymph; I have seen them sink in water like liver, & their cohesion so destroyed, that they could be torn & penetrated by the finger with the utmost facility. In this condition of these organs, I have sometimes seen genuine black vomit. Here an important question arises,- must active inflammation invariably be treated with the lancet? If inflammation is an unit, differing only in degree, the treatment must be of a similar character. But I do not believe in the unity of disease: neither do I believe in the unity of inflammatory action. I believe that inflammations are various; that some assume a peculiar & specific character, & demand a peculiar management. Take for instance the carbuncle or anthrax. Here is inflammation in a high degree: the feelings of the patient proclaim it; we detect it by our organs of vision. Here is an inflammation which runs its course to the destruction of the part; the cellular texture inflames & sloughs. But will any experienced man say that anthrax may be cured by vigorous depletion by the lancet? No. Whatever theory may suggest, the experience of the oldest practitioners is directly opposite. A different plan must be pursued in the treatment of the disease: you must allay pain by opium, give tonics, & apply blisters & poultices to the part affected; but you must not draw blood. I

recollect, in the early period of my practice, before I was aware of the nature of the disease, I had a patient afflicted with anthrax, & directed leeches to be applied to the inflamed part. Dr. Physick was called in consultation, & I informed him what I had done: at the same time I told him I had not yet taken any blood from the arm. His reply was, "No: bless your soul! no – nothing of that sort." He said that tonics & opium should be employed; & under this treatment, the patient soon recovered. If anthrax is to be managed by opium, tonics, & cordial remedies, let us turn our attention from the outside to the inside, & inquire if an internal inflammation does not sometimes take place, analagous in its nature to anthrax, and yielding to the same treatment. I wish not at this time to give a positive opinion as to the exact identity of these inflammations; but most assuredly I can say, that in typhus fever I have seen topical pain relieved by a practice which would greatly have exasperated the acute phlegmonous inflammation.

On the whole, my views relative to malignant typhus fever are, that it is a disease of low action in which the patient may sink from direct debility; that if the system have vigour enough to react, & the circulation become increased, & at the same time local determination & inflammation take place, a little blood may, in some instances, be drawn with advantage; that the lancet, however, should be cautiously used, & emetics & ca-

shortness with cold ablutions employed in its place for the reduction of action; that topical bleeding by cups is preferable to V.S. on two accounts, because it excites external irritation & takes the blood more slowly, & nearer to the part affected; that sweating may in some instances, be employed with safety, & even with considerable advantage: but that this, like every other depleting measure, should be limited, & not employed in the last stage: in fine, that the doctrine of prostration arising from excessive action, & to be relieved by bloodletting, is very hazardous; for though I admit that a state of suffocative excitement may, in some instances, exist; yet great judgement is required to detect it, & far more mischief than benefit has arisen from the doctrine.

General View of Fever.

I have now gone through an account of several descriptions of fever. This is a subject so interesting in a practical point of view, & it is so necessary that you should be thoroughly grounded in a knowledge of it, that I have thought it best to enter more particularly than I otherwise should do into an account of this kind of disease. I wish now to close the subject by taking a general view of fever as a whole, & examining certain theoretical points connected with it; & first, I shall speak of the premonitory signs of fever.

A general lassitude & dulness are often manifested by patients about to be attacked with fever. They feel indisposed to exertion, & are easily fatigued when they attempt it. A loss of appetite, or irregular appetite, nausea, disturbed sleep, & a constipated state of the bowels are not unusual premonitory signs. Sometimes the patient is disposed frequently to go to stool; but his passages are small & ineffectual. A sense of rigour & chilliness are very common. Dr. Hewson informed me that when the typhus fever prevailed in the prison, an attack was very generally preceded by constipation of the bowels, & that a brisk purge, administered in this stage often proved advantageous. Some years ago the typhus fever existed in the Alms House, during my attendance, & many persons were affected with the complaint. These cases were generally brought down out of what is called the long garret. At first the proper plan of management was not understood; but it was soon discovered. As means of prevention I directed that the rooms should be freely ventilated; I also directed the students to go through the wards & whenever they saw any one complaining of nausea, listlessness, &c. that they should immediately order an emetic of ipecacuanha. After the adoption of this mode of management, the cases became much less numerous, & much milder. You should always remember, [when you have the power,] to attack fever in its forming stage. Dr. Rush used to insist strongly on the necessity of attending to this rule. "How much good have I done", says he, "in the form-

ing stage of fever, by pediluvium

I once attended two patients extremely ill of fever which run into a low, protracted form, or what used to be called a low nervous fever. They recovered after being a long time sick. Sometime afterwards I saw both these patients attacked with what I thought premonitory signs of fever; & had I permitted the disease to go on, they would probably have passed through the same tedious confinement as before. In both cases I blistered the wrists immediately, & the result was most happy.

I will now sum up the general principles of treatment as regards fever. I have endeavoured to impress you with the importance of evacuating the first passages; & also, in some instances, of resorting to general and topical bloodletting, according to circumstances. After this I mentioned sudorifics which often prove very advantageous. But if sudorifics fail; if the skin remain hot & dry, & the patient restless, a better mode of reducing febrile action will be the use of cold ablutions; in some cases when these are improper, you may safely resort to tepid ablutions. I have been much pleased with the efficacy of blisters for local affections - to the head in delirium, to the breast in pneumonia typhoides, &c. But there is a state of the system when blisters come in very properly as a general remedy. This is particularly the case when the patient is very restless, throwing about his limbs, constantly changing the position of his body, & often sighing

or in other words, when he has fallen into a state of great nervous irritation. Here blisters often produce a very happy effect. If called upon to mention the remedy most powerful in arresting the progress of fever, (if indeed it is to be arrested,) I should unhesitatingly say, that blistering is that remedy.

Tonics & stimulants are to be used according to the directions I have before given, remembering that it is easier to maintain the proper strength of the system, than to restore it after you have suffered it to sink too low. That there is a possibility of elevating the system beyond a proper point; that stimulants are not permanent in their action, & hence it is necessary, in cases of great debility, to interpose between the doses, some article that is capable of supplying nourishment & permanent strength — such as essence of beef, strong broths, & other highly nourishing articles.

There is another fact in the low state of fevers to which I wish to call your attention. It not unfrequently happens that patients are so low as to be insensible to the calls of nature. I have known a vast collection of urine in the bladder without the attention of the patient or the physician being called to the circumstance. I have witnessed a case of low fever when the bladder was so much distended as to reach nearly to the scrobiculus cordis, & resembled the uterus in the 8th month of pregnancy: but it was not discovered till too late. The water it is true was

drawn off, but the patient soon died. In low forms of fever, always make it a point to inquire into the state of the bladder. I have known instances in which patients affected with fever, by lying on their backs, have lost all power over the bladder; & it has been absolutely necessary to use the catheter every day for a considerable length of time. If this accumulation goes on increasing, the water at length comes away spontaneously; & practitioners attributing this symptom to general debility, neglect the catheter, the only method of procuring relief.

Particular attention should be paid to the limbs of children in the low stages of disease, as there is danger of their becoming permanently contracted if they remain long in one position. Moreover, the parts on which the patient lies being long subjected to pressure, sometimes slough extensively, forming sores very difficult to manage. To prevent this, the position of the patient should be frequently changed; & when it has happened, the pressure should be taken off the excoriated parts by appropriate cushions.

These I have thrown out as general observations on the subject of treatment; next I will make some remarks on the usual signs of convalescence. When attending a patient with fever, at the approach of the critical days, I always look out for some symptoms indicating that a solution of the disease is about to take place. I have often hailed certain appearances that

might have escaped a superficial observer – I have hailed them as the approach of the morning dawn. The tongue is often an index of the state of the disease. As a general rule, the tongue is furred in fever; & the cleaning of it is often the first evidence of convalescence. A man accustomed to examine the tongue, will discover a disposition to clean on the tip & edges before a superficial observer would have his attention called to it. There are two ways in which the tongue may clean. Most commonly the fur gradually disappears; & then a speedy restoration to health may be anticipated. Sometimes, however, it breaks away at once; & under these circumstances, the convalescence is tedious, paroxysms of fever often return, & sometimes occur daily for many days: but the disease gradually wears itself out, & the patient ultimately recovers.

Critical sweats are often signals of convalescence. I have before told you that the fever with which I was affected, from attending in the Howell family, (The Howell family & the Doctor's illness have not been alluded to before,) terminated in a profuse sweat on the 7th day.

A reduction of the frequency of the pulse, when accompanied with other favourable symptoms, may be regarded in a pleasant light: but unless the attendant symptoms are considered this sign will often be found to fail. In yellow fever, the pulse becomes moderate & natural, and an inexperienced physician will be apt to suppose that all is well, when another better acquainted with the dis-

case will predict a speedy dissolution. Patients will often recover from fever with a frequent pulse; but under these circumstances, I am disposed to keep watch, for fear that some internal mischief may be going on.

The state of the bowels should also be regarded. In fever the bowels are always in an unnatural condition; sometimes constipated; sometimes the reverse. Even if medicines operate freely, you will find the passages not to be natural & healthy, but often dark coloured or green, & exceedingly offensive. When these change, & yellow fecal evacuations are procured, you may then infer that the liver which sympathizes with the general system, has now undergone a change of action; that healthy bile is secreted; & that convalescence is beginning to dawn. There are, however, exceptions to this rule: in the case of a young man attended by Dr. Moore, the evacuations from the bowels became perfectly natural but a short time before his death.

The urine is not so much attended to as it ought to be, as affording signs of the state of disease. Among the old practitioners it was so closely observed, that they were apt to neglect more important indications; & hence it came came into neglect. But certainly, it is of great advantage to attend to this excretion in fever. Dr. Wistar used to pay much attention to it, & the same is the case at present with Dr. Griffitts. When the fever abates there is said to be generally a deposition of latericious sediment in the urine. I can little on this subject from my own experience, as I

have paid less attention than I should have done, to the urine as an index of the state of the disease.

One accustomed to examine the countenance in fever, will place much dependence on its expression, in forming an opinion as to the approach of a favourable or unfavourable crisis. But in this case description can convey to you no definite idea whatever. It is only by experience that we are enabled to form a correct judgment from this source.

When speaking of the signs indicating a predisposition to fever, I mentioned that a change of habits often takes place. For instance, a man so fond of tobacco that he will give even bread for it, loses entirely his relish for this article. But in convalescence, you find a return of old habits among the very first signs. A desire for customary food, & what is a remarkable fact, a desire particularly for bread, is a very favourable symptom. I have often been struck with the fact that patients in a fever will take food of certain kinds, but seldom wish for bread. An experienced black nurse in the yellow fever Hospital, in 1805, made a remark which I have since often thought of, – that all the patients who wanted bread recovered: & though this is not universally the case, yet I have no doubt that his observation was founded on experience. I once knew a patient exceeding low with nervous fever, who in the dawn of convalescence, called incessantly for milk; & from that time he began to recover.

When there has been much delirium, & this subsides, it may be regarded, in general, as a mark of convalescence. But this is not always the case. We sometimes find delirium continue raging to a very late period, then it subsides, & the patient becomes perfectly calm, yet sinks speedily into the grave. In protracted cases of nervous fever, we often have the most decisive signs of convalescence before the mind begins to act with regularity. In the case of the patient who called so earnestly for milk, three months elapsed after this time, before his delirium subsided.

I will now speak of the unfavourable signs in fever. When the pulse is very much increased in frequency, becoming almost to rapid for enumeration, you may conclude that the case is going on very unfavourably. When along with this you have subsultus tendinum, the danger may be considered still greater. Sometimes, however, you may be alarmed with the idea that the patient has subsultus tendinum, when in fact, the motions of the muscles are voluntary. In the case of a very amiable girl whom I attended in consultation, as sitting by the bed side & feeling her pulse, I felt a start of the tendons in her wrist. Hoping that she might have voluntarily moved her fingers, I made the inquiry of her, but found that she had not been sensible of any motion; & I then drew a very unfavourable augury from the occurrence. She was a corpse next morning.

A brown, dry, & chopped tongue may be regarded as a

bad sign; though patients often recover after this symptom has appeared. But there is another kind of tongue, particularly in old people, which is deceptive & very dangerous. I have seen it in some cases:- the tongue becomes moist, & seems disposed to clean. On examination, I have found that it presented a mucous surface, retaining a brownish colour, & imparting to an observer the idea that the patient had been taking currant jelly, or some dark coloured mucilaginous article. This is a very bad sign.

The evidence drawn from the appearance of the blood is sometimes important. Rippingin, a cupper of large experience, in this city, has often been able to form a very correct prognosis in fever, & I have frequently been struck with the truth of his predictions. In Dr. Wistar's case, when he had been cupped, Ripingin, as he was coming out of the room, said to me, "Doctor, he will die". I asked him his reasons for supposing so. He told me his blood was blue. He then reminded me of the case of a patient I attended in which he had observed the same appearance of the blood. What he meant by this condition of the blood, I did not exactly understand; but I am inclined to believe that his observations are correct, & that the blood is dissolved.

Delirium occurring in the latter stages of fever, particularly when it is of that maniacal kind which induces the patient to snap & bite, is a most dangerous symptom. Convulsions in the same stage are extremely dangerous, & very generally fatal.

Torpor of the whole system in the latter stages is a very bad sign. When you see persons, who in health were remarkable for delicacy of feeling, become careless about the exposure of their bodies to the attendants; if at the same time, there is a disposition to slip down in bed, & involuntary evacuations of urine & fæces take place, you may consider the case as exceedingly dangerous, though not necessarily fatal.

I will now say a few words on the dying state. Let the disease be what it may, the appearances in this state are very similar. In chronic cases you will discover a condensation of the fluids of the eye, & an apparent film over the cornea. This is almost always a fatal sign. But a still more striking symptom is a peculiar kind of respiration which comes on just before dissolution. The muscles subservient to breathing, seem to be totally from under the control of the will, & the patient is unable to prevent that distressing frequency & hurry of respiration which is to be regarded in so unfavourable light. This kind of breathing is followed by those deep inspirations which mark the dying state. The symptom which I have invariably found to be fatal is a projection of the under jaw. After this has occurred I always expect a fatal issue within 20 or 40 minutes. I was once called to see a little girl with epileptic fits, whom I had several times visited before in the same complaint. When I entered the room I something peculiar in the case. There was among other symptoms a prodigious throb-

bing of the carotids. The patient had been bled before I arrived. I told the parents there was something peculiar in this attack; & while looking at the patient, I observed, all at once, a projection of the under jaw. I was immediately impressed with the conviction that death was near at hand, & I had hardly time to prepare the minds of the parents for the change which was about to take place, before the patient died.

We will now pass to other views of this interesting subject of fever; & first, we will examine the doctrine of critical days. Hippocrates taught that there are certain days on which fever is disposed to come to a spontaneous crisis; & the doctrine has not been without advocates from his time to the present. Dr. Rush believed in critical days; & though he employed the most active remedies in the treatment of fever, yet he used them not with a view to cut short the disease, but to prevent unpleasant consequences to the ~~patient~~ system during its continuance. Let us examine what is the course nature pursues in intermittent fever. Suppose a patient to be afflicted with a tertian. First you observe chilliness or rigors; sometimes so considerable as to amount to a complete shaking ague. When this rigors subsides, the system reacts, the skin becomes hot, the countenance flushed, the pulse active, & the hot stage is completely developed. After this has continued for a short time, nature brings about a solution of the fever. The heat abates, the frequency of pulse is diminished, a profuse perspiration

breaks out, & there is a complete absence of disease. The patient now walks about & pursues his usual avocations till another paroxysm occurs. Here then is an example of a crisis brought about by nature; &, as a general rule, the same course is pursued – we have the same succession of chill, fever, & sweat, whatever remedial measures may be adopted to prevent it. But by interposing proper remedies between the paroxysms we can prevent their recurrence, & thus effect a cure. I wish you to observe, however, that we do not break the disease; we only take advantage of an interval allowed us by nature to prevent a return of fever. If all this is true with regard to intermittents, why deny that remittents may be governed by the same laws? In remittents there is every day a diminution of the febrile symptoms, & an apparent effort on the part of nature to effect a solution. The effort, however, does not succeed, & an exacerbation again takes place. This state of things continues for a certain period – 3, 7, or 9 days, for instance, when, sooner or later, according to the nature of the disease & the constitution of the patient, a complete crisis is effected. As in intermittents, every other day the fever is disposed to disappear, & at last goes off on one of those days on which it would have gone off, had the disease been a tertian fever. I do firmly believe that remittents are governed by the same laws as intermittents. We are led by this doctrine of critical days to ask the question, whether by treatment we are able to cut short a fever, or, in other words, to prevent it from running

a determinate course. This, as I shall soon show you, is a deeply interesting & important consideration. I am prepared to say, when fever is fairly formed; when it has passed over the period of predisposition, or that space which immediately precedes the full establishment of the diseased associations, that, as a general rule, it cannot be cut short. Its violence may be much moderated, & by proper treatment, it will generally be conducted to a favourable issue; but it cannot be arrested in its progress, at least, in the great majority of cases. This is not a matter of mere speculation: it is of the utmost practical importance. If fever is to be cut short, it follows, that in violent cases, violent remedies must be resorted to for their cure. Thus, in yellow fever, a disease which runs its course in a few days, & is characterized by the utmost malignancy, if treatment is to cut it short, the most vigorous measures must necessarily be employed. Now let us examine this point, & ascertain the result of different kinds of practice. The time was when it was generally believed, that it was scarcely possible to treat yellow fever too actively; to draw too much blood, or to throw in too much mercury. This at one time was the fashionable practice in our city. Other strong measures were also employed. But I believe that the practice of Dr. Mongis will be found as successful as that of any other physician in Philadelphia, if not more so; & it was remarkably mild. In some instances, in the early part of the disease, if much action was evident, he drew a little blood; but he never ever

ployed mercury. His practice was very simple, & not calculated to cut short the fever, but to conduct it to a favourable issue. In the year 1805, in the city Hospital, the practice in yellow fever became much more simple than it had been in the preceding years, & the lancet was seldom resorted to. The practice of that year was admitted to be equally successful, if not more so, than in former years when a different course was pursued. Let us now desert from the yellow fever to our own indigenous fevers. Take a case of autumnal remittent, & see how far a practice calculated to cut up the disease by the roots is preferable to mild measures, calculated to conduct it to a favourable issue. Instances are not wanting in which practitioners have pushed on with the utmost boldness in the management of autumnal fevers. In Lancaster County, on the borders of the Susquehannah, a gentleman gifted with strong talents by nature, & possessed of much medical information, fixed himself with a view to practice. He had written an inaugural essay on the unity of disease. A fever arose in his neighbourhood, which, in the hands of this physician, became a most mortal epidemic. In a small circle as many as 52 deaths occurred. What was the treatment? It was of a most violent character, & carried to the utmost extent. Bleeding, profuse bleeding, was resorted to in every paroxysm; & whenever the fever rose it was to be counteracted by depletion. What were the consequences? His patients died around him in great numbers. What was the result of an opposite course of treatment?

In the same neighbourhood, in the same disease, men with not half his talents & medical attainments, guided by experience & common sense, & not under the influence of theory, met with great success. In their hands, the disease which he had found so fatal, became a moderate disease, & yielded, as autumnal fevers generally do, to comparatively mild measures. Evacuations from the stomach and bowels by emetics & cathartics, sweating, the occasional use of the lancet when the symptoms run high, with blisters, & bark in the remissions or intermissions, constituted the routine of their practice. But by this practitioner bark and all tonics were utterly condemned; & even when the patient exhibited symptoms of the utmost debility, no stimulant medicines were allowed. I mention this instance to show how fatal is false theory, even when the man who believes in it is possessed of good natural talents.

There is another view of the subject which, however humiliating to the pride of medical science, must, nevertheless, be taken. I am very far from holding out the idea that medical interference is entirely unnecessary in fever, & that the best course is to leave the disease to nature alone. I have said enough to convince you that I am not idle myself in the treatment of such cases. But I have now to relate a fact which, at any rate, should make us pause before we adopt violent measures. A very respectable practitioner who was a surgeon in the army during the late war, Dr. Trowbridge, informed me that, at a certain period he was so

situated in the camp as to have the power of making a comparison between the effects of art, & the unassisted operations of nature in cases of fever. At one time there were 30 patients sick with this disease, who had no medical attention whatever, & from circumstances which could not be avoided, were unable to obtain any. Yet the Dr. found that they made out just as well as those who had been under treatment: the same proportion, as far as he could judge, recovering in the one case as in the other. This is a humiliating fact; but it is worth remembering. Before using severe measures in anticipation of certain events, let us be certain that those events are likely to occur. I am persuaded that violent measures have often done much harm; as much, perhaps, as the disease would have produced if left entirely to itself.

There have been many speculations in the medical world as to the cause of fever; & bottomed on these speculations many hypotheses have flourished for a time & then passed away. At present there are some fashionable doctrines ~~present~~ prevalent, which require a candid examination. One of these, to which I wish particularly to call your attention, is that recently given to the world under the name of an eminent French physician – I mean Broussais. He teaches that all fevers depend on intestinal irritation. The mucous lining of the stomach & bowels he considers peculiarly liable to inflammation, & regards it as the primary seat of fever. Others tell us

that fever is ushered in by an engorged state of the venous system, or a state of suffocated excitement - two theories which apply to the same circumstances; the first spoken of largely by Armstrong, the second supported by Dr. Rush. There are some who maintain that in every case of fever, the liver has much influence in its production; while another set believe the brain, if not the primary seat of the disease, is at least more or less interested in it. Now I am willing to admit that, to a certain extent, all these are correct in their opinions. That we have local irritation & inflammation in fever there is no doubt: but I am disposed to consider this state of things, not as a cause, but as a consequence, of fever. That fever may arise without any inflammatory action of the system, I think I do know; nay, I have known it to occur under a precisely opposite condition. Profuse evacuations of blood may produce it. I recollect the case of a lady who had suffered from profuse hemorrhage which had reduced her so low that her extremities were cold and her pulse extremely feeble; yet the next day she was affected with fever, & action enough existed in her pulse to call for the lancet, if other circumstances had not contraindicated its use. Dr. James who attended the patient with me, observed that Dr. Denman, or some other celebrated accoucheur of London, speaks of this as a circumstance not uncommon; & that

patients rarely die of uterine hemorrhage from the mere loss of blood, but from the fever which follows. In opposition to the opinion that intestinal inflammation is the primary cause of fever, let us take a case of common intermittent: in this complaint the patient passes through the cold, the hot, & the sweating stage, & is then for some time free from disease, till another paroxysm commences. Now if inflammation were the cause of the fever, this would remain as constantly present as the inflammation itself: at any rate, the disease should not be entirely removed by bark & a generous diet - means certainly calculated to exasperate a case depending on inflammatory action in the stomach & intestines. But disorution it is said gives unquestionable evidence of the existence of inflammation. Let us inquire what are the proofs on which this conclusion is grounded. By post mortem examinations there is frequently discovered a red & suffused condition of the vessels of the stomach & intestines; & with many others, I was myself once inclined to accept this appearance as an evidence of inflammation: but I am now convinced that suffusion of the mucous membrane may exist without such a cause. I refer you to a paper in one of the numbers of the Eclectic Repository, by Yellowly of London, in which it is stated by this physician, that having been induced to suspect that the common evidences of inflammation were not well grounded, he instituted a set of experiments to ascertain the fact. He took for subjects men who had

been recently executed for crimes, & of course had died instantly without previous disease. In a large proportion of these cases he found the same red appearance in the stomach as had been observed under other circumstances, & had given rise to the supposition that the patients died of inflammation. The experiments of Dr. Seeds are peculiarly interesting, & illustrative of the views now given. He bled a number of animals to death; some suddenly; some gradually; some from the arteries, & some from the veins; & dissection gave appearances resembling inflammation. Not only was the mucous membrane injected & red, but extensive serous effusions were also found. I refer you to his paper on the subject, published in one of the English Journals.

In concert with Drs Emlen & Gibbard, I tried the experiments on two hogs which were slaughtered; & the experiments of Dr. Seeds were fully confirmed. In the Journal to which I referred you, another very valuable paper will be found, published as a letter from Dr. Davy of India to Dr. McGregor of Great Britain, calculated to show certain deceptive appearances resembling inflammation, which are discoverable after death by dissection. By his observations & experiments we are taught that the blood percolates through dead tissues, acting as a mordant, & presenting appearances that might be referred to inflammation, & which might deceive the most experienced anatomists. At my request, Dr. Harlan repeated the experiments of Davy, & his statement proved to be true.

But when I refer to Broussais himself, & examine the statement of some dissections he has given; & observe that he has called that inflammation, which should be considered as the result of an opposite condition, I can place very little reliance upon his conclusions. In a review of Broussais' work by Johnson of London, a case is extracted which terminated fatally after a system of the most rigid starvation had been pursued for more than 20 days. On dissection it was found that the whole alimentary canal was contracted so as to have its internal surfaces almost in contact; & throughout the intestines, the mucous membrane was dry & of a logwood colour, without any fecal contents. Now this state of things, so far from being an evidence of inflammation, I do sincerely believe to have originated from the rigid system of starvation that had been employed.— So far will preconceived theoretical notions run away with the judgement.

We are told that there is another proof of inflammation afforded by dissection; viz. serous effusions into the various cavities; as those of the brain, thorax, &c. Now I admit most freely, that in certain cases of morbid action going on in these parts, during an attack of fever, we have considerable effusion; & in some instances, a general dropsy will ensue, coextensive with the different cellular tissues of the body. But this, so far from being universally the result of excessive action, is often consequent upon debility. Let us take a patient with fever worn out by the continuance

or severity of the disease, & examine what is the state of the system: — all its powers are laid low, sensibility is lost, the action of the heart is manifested by a pulse barely perceptible, & we have the cold, clammy surface of death. If effusion displays itself on the skin, as in the cold sweat preceding dissolution, may it not also take place, in the same state of extreme debility, from the serous membrane lining the various cavities? The absorbents partaking of the general debility are so far unable to perform their office as to remove the fluids that is exhaled from these membranes, & the consequence is an unnatural accumulation. I once witnessed a case illustration of this statement: a lad by a fall from a garret window received a violent concussion of the brain, of which he died in a few hours. When I was called to him, perceiving a fracture & supposing the symptoms might depend upon compression from effused blood, I took away by the trephine a portion of the skull. Here then was a fair opportunity for observation. A window, as it were, was made through the cranium, which permitted a view of the operations which were going on within. Had there been violent excitement, I should certainly have witnessed it: but there was no pulsation perceptible; his system never reacted; & in a short time he expired. On examination after death, serous effusion was found in the brain. In this instance it could not have been the result of excessive action — it was the last act of the dying vessels; & as the absorbents were too feeble to perform their part, an accumulation necessarily resulted.

It is said that change of structure, an induration or thickening of parts, is an evidence of previous inflammation. That such changes may result from this cause I very well know; but it by no means follows that they are universally to be attributed to it. Because while disease may exist in other parts of the system besides the bloodvessels, the absorbents may not properly perform functions; & the result may be, that what the arteries deposit in the course of their healthy action, the lymphatics may be too feeble to remove; & induration and enlargement hence take place. The growth of steatomatous & other tumours of the like kind, is an exemplification of this statement. In these enlargement occurs without the existence of inflammatory action.

By Armstrong & some others we are told that death often results in fever from the engorgement of the veins in the internal & vital organs. The brain is inundated; the liver, lungs, & vessels of the intestines, are distended with venous blood; & the system oppressed beneath the burden sinks & the patient expires. This state of things is said to be proved upon dissection. But if a man passing along the street were to receive the full force of a blow from a falling brick, & instantly expire, - what do you suppose would be exhibited by dissection? The large venous trunks would be engorged with blood. In a state of health there is a certain proportion between the quantity of blood in the arteries & veins; but during the act of expiring, the former vessels empty themselves into the latter

& hence the appearance of venous congestion which has so often been considered the cause, instead of the consequence of death. The theory which attributes the alarming symptoms we often observe in the low state of fever to venous congestion, appears to me to be a very limited & narrow view of the case. We should rather look to the nervous system as the ~~cause~~ seat of the mischief. When the brain & nerves become debilitated, & the usual supply of nervous influence is not imparted to the bloodvessels, the heart acts with diminished vigour, & the blood, of course, accumulates behind it in the large venous trunks. If the supply be entirely cut off, the heart must cease to act, & death will result, not from congestion, but from nervous exhaustion. Consider the effects which followed the division of the 8th pair of nerves in a horse, by the celebrated Dupuytren. The most distressing symptoms were produced – his breathing was excessively disturbed, violent efforts were made by the animal to expand his thorax, & thus compensate for the diminished power of the lungs: but all his efforts were unable to afford relief. The symptoms went on increasing, till the horse, in the utmost agony, expired. After death the blood was found to be of a coaly blackness.

In some of the low forms of fever, when the energy of the brain has been insufficient to furnish the due quantity of nervous power to the lungs, I have been strongly reminded of the above experiment.

We have further evidence that patients die from

imperfection of nervous power, without the bloodvessels being at all concerned in the event. In surgical operations the system sometimes receives so violent a shock that it never ~~recovers~~ rests. In these cases death is not to be attributed to inflammation, or disorganization of a vital organ, but to that impression on the nervous system which prostrates the functions of life, & renders the various organs incapable of performing the task assigned them.

I have brought forward these facts to show that medical men are too apt to regard only one side of the question; & to limit their views to congestion, inflammation, & consequent disorganization of the vital organs as a cause of death. when, in fact, this termination often takes place in disease without any thing more than a general sympathetic affection of the bloodvessels. That in some cases of fever there is strong local determination, & even inflammation, I am not disposed to doubt; it is only the universality of this occurrence that I call in question. I have indeed not unfrequently witnessed cases where local excitement was strongly marked. I once attended one of the pupils of the Alms-House, who was attacked with fever, attended with so much excitement in the brain as to amount to phrenitis. The inflammatory action was indeed unequivocal, and he was bled 100 ounces before he recovered. From this you may infer that I am not unwilling to employ the lancet when the state of things seems to demand it.

But to continue with Broussais that every fever is an

inflammation of the mucous membrane of the stomach & intestines, & to be treated by depletion, or, at any rate, under all circumstances, by the most rigid antiphlogistic regimen, restricted even to a solution of gum tragacanth or gum arabic, appears to me absurd & preposterous in the extreme. One of the cases of this kind brought forward by Broussais in illustration of his principles, which terminated fatally, was, in my opinion, as clear an instance of death from absolute starvation as could be adduced. The patient had been sometime sick, with fever, but he recovered gradually, & was at length restored to tolerable health. All at once, however, he was again taken sick, & was put on the rigid diet prescribed by Broussais. Things went on this way for some time, when it was found that the poor fellow, tormented with hunger, had procured some food from his comrades & concealed it in his bed. (The patient was in one of the French Hospitals.) He was now restricted still more carefully than ever. But there was no amendment; & for 20 or 30 days he continued wasting away, till at length he died, reduced almost to a skeleton. On dissection the calibre of his intestines was found reduced almost to nothing; the mucous coat was of a dark red colour, indicating, according to Broussais, the previous existence of severe inflammation; but in my opinion, the effect of the starving plan of treatment which had been pursued.

It seems to me that this rigid system of diet is cal-

culated to defeat the very object for which it is prescribed. Its authors appear to have forgotten that there are absorbents which are constantly taking up the substance of the body & conveying it into the circulation, & which act with increased energy whenever a moderate supply of food is withheld. Surgeons understand this perfectly. What is more common than to remove tumours through the agency of the absorbents? and what calls these more speedily into operation than low diet, purging, &c.? When, therefore, a patient with fever is deprived of enough food to supply the demands of nature, the body feeds upon itself; & is, of course, supplied with that very kind of food, the entrance of which into the bloodvessels is so much dreaded. Cellular membrane, fat, muscle, bone, & marrow, are indiscriminately absorbed by the lymphatics, & the circulation is supplied with animal food, & that too in a diseased, & no doubt unwholesome condition.

Of the Pulse.

The knowledge of the pulse is, by common consent, regarded as a truly important part of medical education. Dr. Rush was in the practice of inculcating the necessity of studying the pulse; & he used to say in his lectures, if were we he should erect a temple to medicine, he would inscribe over the door, "Let no man enter here who does not under-

stand the pulse". An important question here arises, at which you may at first be startled; – may not too much reliance be placed on the pulse abstractedly considered? I intend in this lecture to offer proofs in the affirmative.

Before entering on the different varieties, I will make a few remarks on feeling the pulse. For this purpose we generally select the radial artery at the wrist, because it is more accessible than any other. But it is right to understand that the other arteries are capable of giving correct indications as far as the pulse is concerned; & a knowledge of this circumstance is important, particularly as relates to children. These are frequently very averse to having their wrists felt, & on account of their restlessness it is sometimes impossible to form a correct judgement of the pulse from the radial artery. In some instances of this kind, we can succeed very well by examining one of the tibial arteries. In one instance when there was great objection on the part of the child to my touching his arm, I succeeded without any resistance in examining ~~the~~ an artery of the foot. The temple is also a good situation for examining the pulse.

I will make another preliminary observation, relative to the distribution of the arteries. You know very well the course of the radial artery in common cases. But there are not a few persons in whom it deviates from the common direction by running round the radius. Instead of passing the front of the bone, it makes a turn, in these instances, & runs along the back of it. I myself have been deceived in

several instances from the want of attending to this circumstance. Sometimes the radial artery bifurcates above the wrist; only a small branch taking the usual direction. I have seen cases in which it might be supposed that the person was almost pulseless; yet by examining an artery in some other situation, I have found as fine, bounding a pulse as could be desired.

The pulse is very various in different individuals. In some it is very slow, naturally; in others, frequent & excessively irritable. I have compared it to the multifarious operation of the human passions. How quick to anger do we find some people, & how easily is their anger allayed! Carry this to the pulse: how often do we find this excited to violent action by the slightest causes, & how easily is it allayed by proper treatment! Others, on the contrary, are with difficulty roused to anger; but their passions when once excited are not easily subdued. The same is the case with the pulse. Some constitutions endure to a most astonishing extent, the operation of injurious causes, without feeling the effects which we might naturally expect to result. In proof of this insusceptibility to be acted on by causes we should naturally suppose to be injurious, I refer you to a case of fractured leg, of a waggoner, related in my surgical lectures.

In some constitutions the pulse is excited very easily. The hectic pulse is sometimes induced by very slight causes. It is stated that Dr. Pitcairn had a very irritable

pulse. Dissection showed a slight degree of ossification in the heart, which was supposed to be the sole cause of this irritability in the arterial system.

In the sacred writings we are told that "a soft word turneth away wrath." Thus, in irritability of the arteries soothing treatment often answers better than the most copious evacuations. An irritable pulse may, in some persons, be allayed by nutritious aliment. I know a person whose pulse is liable to be thrown into great agitation, & to become very frequent; but may always be delayed by a hearty meal. I have myself made the observation; I have seen it become slow, full, & more natural, as the system was elevated by nutritious food.

In some people there is a disposition to sink immediately & without a struggle under affliction; others rise in proportion to their afflictions. We may apply this to the pulse, particularly in chronic diseases. How often does life remain in the heart & arteries, when death is in almost every other part? I will here give it as my opinion, that we may frequently be led into great error, by constant efforts to reduce the pulse. In many chronic diseases; in phthisis pulmonalis, for instance, it seems as if the heart & arteries take on an irritable condition which is never to be reduced. I have heretofore, when treating of typhus fever, alluded to the synochula pulse of Dr. Rush, which is characterized by its smallness, frequency, & tension. I now repeat, that in some chronic diseases,

we find this pulse connected with a state of most alarming debility. I shall instance several cases illustrative of this opinion, when I come to heat of pulmonary consumption. I would have you make it an object of particular study to distinguish between irritability & inflammation. I have seen patients in hectic fever worn out by nervous irritation, who, at the same time, had a pulse that, in certain conditions of the system, would have authorized me to unsheathe the lancet & bleed with freedom. How much mischief has been done in phthisis by a reliance on the pulse! How important, then, to be able to distinguish between irritability & inflammation!

There are some pulses which, I am safe in saying, can never be reduced. I have compared the resistance of the heart & arteries, in some of these cases to the temper of Meg Merrilies, the celebrated gipsy queen. She was a strong politician & a great advocate for Charles. The mob of Stirling, who were of the opposite party, caught poor Meg on one occasion, & determined to duck her into a change of politics. Having seized her they threw her into a pond of water, & pulling her out again, demanded if she was still for Charles. She continued obstinate, & they repeated the operation several times, till she sunk under it & died. So long as she retained the power of utterance, whenever her head appeared above the water, she constantly cried out, "Charly yet, Charly yet." The same is the case with the heart & arteries: deplete as

much as you please, they will, in some instances, never give way till the patient lies prostrate in death. I was called to an aged lady who was attacked with an epileptic fit. When I entered the room, I saw death in her countenance & general condition, except her pulse which was full & strong. I sat down by her bed-side, & is something is always expected to be done immediately in cases of extreme danger, I ordered sinapisms to be applied to her feet: but before they were procured she expired. Another lady, aged 72 years, died under my care. She declined very gradually for several months, & for a number of days before her death, scarcely any thing passed her lips; & yet her pulse possessed force when the operations of death were conspicuous in every other part of the system. And the dying state instead of being marked with the cold, clammy skin, was attended by great apparent febrile heat. While the hippocratic countenance, & her eye was dimmed by that peculiar concretion of fluids, which produces the philm on the cornea so often observed in articulo mortis.-

Soothing ~~cases~~ measures in these cases will often do more than all the evacuants that can be employed. The fact is, some persons have naturally a very tense pulse. I may venture to make the assertion, which your own experience will in a few years confirm, that a natural pulse may sometimes be mistaken for a diseased one, & long continued efforts made, under this impression, to reduce it. I advise you to be on your guard against such

a mistake. If you feel a strong tense pulse, & at the same time, directing your inquiries into other circumstances of the case, find the health good without any other symptom of disease, you should conclude that the pulse may be natural. I well knew a respectable old lady who had a pulse of this description. I have often felt it when she was in a state of perfect health, & have told her that many physicians unacquainted with its natural character, would, without hesitation, advise her to be bled. I once had a patient in the Alms-House who had been bled profusely, & this to reduce a pulse which I had every reason to believe was not a diseased one. In 1821, my pupil, Chevalier, from Georgia, came to me after the lecture & requested me to feel his pulse. It was a most powerful one, similar to aneurisms. He informed me that in order to reduce it, he had, by medical direction, been confined to the house for two months, dieted, bled ad deliquium, took digitalis, &c. &c. All this failed, he was happily permitted to escape from treatment, & it was found to be his natural pulse!

The most experienced practitioners have been deceived in the action of the heart. Dr. Wistar used to relate a very interesting anecdote which will go to prove this assertion. While a medical student at Edinburgh, he with a number of others, was performing some experiments on animals. Among them one dog was bled to death. Just before he died, a practitioner of the first respectability,

who was much in the habit of feeling the pulse, entered the room. They purposely concealed from him what they had done, & requested him to lay his fingers on the arteries of the dog, & tell them whether it was sthenic or asthenic action which was going on. Accustomed as he was to the pulse, he pronounced it to be sthenic action. This may at first surprise you: but experience hereafter will inform you, that in some diseases of great debility as dyspepsia, &c., the heart beat will palpitate with very great violence. We find the same thing in some cases of nervous irritation. I was acquainted with a medical gentleman, Dr. Anderson, who told me that so great was the irritability of his system, that even a drink of milk would produce violent action in his heart & arteries. Persons in a reduced condition may acquire so much irritation of pulse, that practitioners if they followed the example of the Chinese physicians who judge by the pulse alone, would be led into the most egregious mistakes in practice. Always remember that palpitation of the heart is sometimes met with in cases of extreme debility, & is frequently associated with danger.

When treating of typhus fever, I mentioned the case of a gentleman affected with hæmoptysis, when other symptoms more important than the pulse induced me to resort to the lancet. The pulse was weak, but the evidences of active hæmorrhage were strong the man had previously been in tolerable health except a cough; nor indeed was he even now

laid prostrate, but was able to walk about the room. His His countenance did not exhibit those appearances of languor which accompany cases of great debility. The blood was florid & the hemorrage was evidently active. Under these circumstances, without regard to the pulse, I used the lancet. I employd it, moreover, time after time, & found his strength adequate to sustain the depletion. The effects produced were beneficial. I have observed this weak state of the pulse, in more than one instance of active hemorrhage from the lungs. I am not, therefore, guided by the pulse alone, but consider the symptoms collectively & decide accordingly.

Inflammation of the bowels or peritoneum is sometimes attended with a state of pulse extremely deceptive to the young practitioner. In cases of this kind I am very much disposed to look for other symptoms, & to ground my practice on what I observe distinct from the pulse. Among the symptoms of these complaints, which are enumerated in the books, no one is more important than great tenderness of the abdomen on pressure. When we find a patient whose countenance is marked with an expression of great distress; when we find in the same person all the pain & uneasiness referred to the abdomen, & at the same time, discover great tenderness on the slightest pressure over the part, I am strongly inclined to suspect a great deal of internal mischief.

It is here proper to observe that tenderness of the abdomen

is not an infallible sign of inflammation. Colic often leaves the bowels in a tender condition. It is occasioned by the severe pinch of the disease. This state of the bowels may be compared to the soreness felt in a muscle, as, for instance, the deltoid, after a blow has been received upon the part. But more of this when I come to speak of colic.

In some cases of ophthalmia, it is not proper to consider the pulse as a guide. Inflammation of the eye may proceed to such an extent as to involve the organ in considerable danger before the pulse will sympathize with the local affection. Dr. Rush who was often very happy in his similes, used to tell us in his lectures, that the pulse, in many instances, refused to sympathize with an inflammatory affection of a small part for a considerable time. He said, when the large vessels are inflamed, as those of the thorax, &c., from their size & influence over the whole system, the pulse is affected directly. He compared them to the bells on the garments of the High Priest, during the Law, which, when one was touched, all rung the same tune. Thus with the great bloodvessels; when one is touched all ring the tune of inflammation: but when the small vessels are first affected, a long time elapses before the large ones participate in the diseased action.

The proposition is certainly correct, & very important. But this is particularly the case in one species of ophthalmia, in which we should be guided much more by the particular appearance of the disease, than by the condition of the pulse. When I come to speak of ophthal-

mica, in my surgical lectures, I shall notice this affection more particularly. It is now sufficient to remark that unless prompt & powerful measures are employed, the complaint will terminate in sloughing & consequently, loss of sight.

In 1818 I was called to see a respectable nurse, in consultation with a very respectable physician of this city, who, however, does not pay any attention to surgery, & was not exactly aware of the nature of the case. The patient was labouring under the form of opthalmia of which I have just spoken. Experienced as I had been in the disease, & knowing the great importance of evacuating measures, I was influenced in the proposition of the lancet much more by the appearance of the eye, than by any information I could have derived from the pulse. The lancet was resorted to; & though one eye was lost, the practice subsequently pursued, rescued the other from a similar fate.

In peritonitis but little dependence should be placed upon the pulse. A lady of this city, the wife of a French gentleman, was recommended to me by Dr. Mongis who was too unwell to attend her himself. On visiting her, I found her complaining of pain in the cavity of the abdomen, with great restlessness & distress. On feeling her pulse I found it possessed little force, though the other symptoms induced me to doubt relative to the propriety of stimulating measures. Aware that Dr. Mongis was

well ~~aware~~ acquainted with her constitution, & knowing the importance of attending to this in all circumstances, I called on the Dr. & stated to him the condition of the patient. He said that experience in her case taught him, that without reference to the pulse there was a necessity for the lancet. I returned to the patient, directed the loss of blood, & had the operation repeated several times. The blood was sizy, & relief was afforded. The information which I obtained from the Dr. was of great importance. I treated the case as inflammatory, & she recovered. Had I managed it as I would have done a case of prostrate action, it is very probable that the patient would have died.

Diseases of the Abdominal Viscera.

Cholera.

This is a disease common to all ages, but peculiarly dangerous in infancy. As it occurs in infants, it is called cholera infantum, & of this I shall treat in another lecture; at present I shall enter into a consideration of the disease as it generally affects adults.

Cholera consists in a vomiting & purging of bilious matter, attended with painful gripes & spasms in the bowels, & not unfrequently with severe spasms in the limbs & abdominal muscles. Patients in a state of pretty good health, are sometimes suddenly attacked with severe vomiting & purging: but I believe it frequently happens that, previous to the attack, a predisposition to the disease exists for some time, & that cholera is ushered in for the removal of an offending cause.

The spasms attending cholera are sometimes so severe, that men of considerable firmness, when under their influence, will lose all command of their feelings, & vent them in complaints loud and distressing. When the disease proceeds to a more advanced stage, (& I can tell you, that this

stage, in some instances, is ushered in the course of a very few hours,) you will be struck with the rapid prostration of strength observable in the countenance of the patient, particularly the eyes. I have seen the eyes, in a few hours, sunk in their sockets in a manner truly extraordinary. Along with this you will very commonly observe a stridulous voice. In fact, great exhaustion comes on, marked by a feeble pulse, cold, clammy sweats, and a very frequent & insatiable desire for cold drinks, which, although so vehemently craved, are almost invariably pernicious. This description, I believe, will be found to comprehend cholera in its common form, as it appears in adults.

When called to a patient in the situation I have described, it is necessary for you to be thoroughly acquainted with the mode of practice, so that no time may be lost; for, in this this disease, as in some others to which I have called your attention, the maxim forcibly applies, "What thou dost, do quickly". In the very commencement of cholera, while the pain is severe, & the bilious discharges from the stomach & intestines are very copious, one of the primary indications, on which the practice is to be grounded, is free dilution with mild drinks. Sydenham recommends a remedy which, at the present day, I believe to be entitled to great consideration: I esteem it an excellent remedy in cholera, & it is nothing more nor

less than chicken water. Tissault, who treats very well of cholera, tells us that the disease is to be cured by draughts, by deluges of the most mitigating drinks. My universal practice, in all cases of cholera, is to obtain chicken water as soon as possible, even if I should be called in the night. The chicken should be cut in pieces, the bones mashed, & a gallon of warm water poured on it & boiled for a time. A little salt may be added to render it more palatable. Of this the patient should drink most copiously. No matter if it be returned from the stomach; you should give it still, & completely wash out that viscus. I believe the chicken water to be one of the most agreeable & one of the safest articles that can be employed. In addition, & alternated with this remedy, I give some herb tea, particularly that made from peppermint. These two are my great remedies for dilution.

But in those cases where the pain & vomiting become very distressing, our object should be, as speedily as possible to relieve the severe spasm to which our attention is called. External application may, in many instances, be interposed, with the most extraordinary benefit. Sinapisms to the extremities may be applied with very great advantage. But the spread plaster to which I have before called your attention, (see p.) is particularly useful in cholera. I have employed it in many instances,

& can speak of the benefit to be derived from it with perfect confidence. But previously to the application of this plaster, I generally employ another remedy which is always readily procured; I allude to the infusion of pepper with hot brandy. Out of this flannels should be wrung as dry as possible, & applied, as hot as they can be borne, over the stomach & bowels of the patient. I would prefer a piece of blanket folded up, as it retains the heat longer than a piece of thin flannel. It is of great consequence that the heat should be retained for a long time: for if the flannel should be allowed to become cool, it might do more harm than good. As soon as the spired plaster is prepared, the flannels may be removed, & the plaster substituted. Fomentations of the kind described, tend very greatly to relieve the pain, & to allay the irritability of the stomach. But if this plan should be insufficient to afford relief, some other remedy must be resorted to, & it is a general practice to have recourse to opium. In some instances the spasms are so violent, that a practice of this nature is absolutely necessary. Here 30 drops of laudanum may be given, & if these should not produce the desired effect, the dose may be repeated till 90 drops have been taken. This practice, however, is advisable only in violent cases. Dr. Wistar was opposed to the use of opium, if any other plan could possibly be de-

vised for procuring the desired relief, without those unpleasant effects which he presumed sometimes result from the use of this article. Acting on the belief that the disease requires free dilution for its cure; that the bilious evacuations are an effort of nature for her own relief, & that any medicines which would paralyze the secreting power, & lock up the bile in the system, must prove injurious, he very generally resorted to spired brandy where other practitioners employed laudanum. His practice was to give the spired brandy, in doses of a tea spoonful, frequently repeated, till the spasm was diminished or overcome. In cases of a milder character I have succeeded very well with an article of this kind:

Take Salt of Tartar, ℥j
Laudanum, dgts Lxxx
Mint water, ℥iv

Some sugar may be mixed with it or not, according to the taste of the patient. The dose is a table spoonful repeated every hour, or if the case be violent, every half hour, till relief is procured. If one or two doses succeed in allaying the pain, you may extend the period of administering the next dose, till a renewal of calls for it. Afterwards you may administer it pro re nata.

Here it is proper to remark, that the spasms in the bowels which are observed in cholera, & which form so striking a symptom in the disease, have, by some practitioners been referred to inflammation as their cause. Now

here, I believe, that incorrect theory leads to dangerous practice. As for myself, I think I can say, without any disposition to boast, that I have rarely ever seen the disease in any other than a manageable form: I would except persons worn out by previous disease. In such cases I have seen cholera evidently hasten the fatal issue; & the venerable uncle of my wife, who lately died, is an example of this kind. But I speak of it as an idiopathic disease, occurring, as it often does, in persons of tolerably vigorous health; & in such instances I have found it a manageable disease. I think I can say that I never saw a case of cholera which required the lancet. My reasons for objecting to its use, in cases of this kind, are the following: In the first place, I do not believe that any inflammation exists. I believe that if we were always to associate pain & inflammation, we should sometimes make great mistakes. For certainly, acute pain may exist in a part without inflammation of that part. The disease is attended with most profuse bilious evacuations from the stomach and bowels. These evacuations in a few hours exhaust, even a strong person, to a very great degree, & produce extreme prostration. When, therefore, life is running out at every pore, & the physician is called upon to support the little remnant of strength, why should he let his theory of inflammation come in & aid in letting it out still faster by the abstraction of blood? If this were a disease of inflammation, I feel confident that the practice which I have

pursued during my whole life, & which I derived from my preceptor who followed it with great success, would have proved highly injurious instead of beneficial. In enteritis spirit brandy would certainly aggravate every symptom: but in cholera, though in many instances accompanied with dangerous & alarming symptoms, these will generally give way to the course of practice proposed.

As the disease advances the debility & exhaustion are extreme, & you will generally be under the necessity of most assiduously watching the patient, & of introducing something stimulant & nutritive into the system. While this plan is pursued external irritation is, at the same time, peculiarly proper. Sinapisms & blisters may be interposed with great advantage, & stimulating frictions are very well suited to some cases of low cholera.

But there is one point to which I must call your attention: I have stated that in this disease the patient generally labours under insatiable thirst & almost always has a desire for cold drinks. You have all heard me say, that in some cases of fever, great benefit is derived from the use of cold drinks; & it often happens that the language of nature ought to be attended to, as her voice is predicated upon reason: but the language of nature is not always true – sometimes, like a child destitute of judgement, she obeys the calls of inclination rather than the suggestions of reason. Hence, cold drinks in cholera are strongly craved by the patient; but if taken in large

quantities they are injurious. The stomach & intestines are in a state of spasm which is rather increased than diminished by the use of cold water. Tepid drinks are greatly to be preferred. I believe that the thirst must be referred to the same cause in cholera as in certain states of fever. I told you that in fevers thirst depends on two opposite states of the system:- in some cases it is accompanied with a dry & hot skin, a quick & febrile pulse, &c.; & under these circumstances it may be gratified with advantage. But in cases of extreme prostration with a cold skin & extremely feeble pulse, the insatiable thirst which sometimes occurs is not to be relieved by drinks, & is found to diminish exactly as the system is raised by the judicious use of stimulants. This, I can venture to assert, is exactly the case in cholera.

Sometimes, in the bilious vomiting of cholera, small quantities of Seltzer-water, or soda-water may be taken with advantage. The saline draught in the state of effervescence is suited to some of these conditions of the stomach; so also are the Seidlitz powders; lime-water is likewise a useful remedy. But I wish forcibly to impress on your minds the propriety of copious dilution in the commencement of the case. If cholera is prematurely arrested by the free use of opium when the pain & spasms are violent, you may calculate that more fever will subsequently arise, than if the bilious evacuations were permitted to go on. But it occasionally happens in practice

that we are found to make a choice between difficulties, & to take the lesser evil. In some of the extreme cases of cholera, the lesser evil is to allay pain & spasm by opium & external applications. Even if fever does come on, it may be combatted by the proper remedies, & is much to be preferred to that violent puking & purging which threaten a speedy extinction of life.

After the first symptoms are arrested, it is necessary, for some days, to treat the case with a good deal of care. Bilious accumulations in the alimentary canal should be prevented, &, at the same time, you should guard against producing debility of the stomach & bowels. Hence, in the progress of the cure, rhubarb may be employed with advantage. In some cases, the spiced syrup may be administered; in others, the article in substance, either alone or combined with small quantities of magnesia. At the same time that you keep up slight evacuations from the bowels, you should employ some vegetable tonic, particularly columbo. A tea may be made of this root combined with ginger, & given in small doses frequently repeated through the day. The diet should be plain & nutritious, & all vapid aliment should be avoided. The plan of treatment which I have detailed is adapted to cholera in its common form. The disease may be variously modified, & hence, require a diversity of treatment. There may be cases in which the interposition of evacuants would be useful; & here calomel comes in very advantageously.

There is one more remedy to which I wish to call your attention – a remedy which I have seen prescribed with great advantage in a case that very much resembled cholera: it was a case of extreme prostration, with cold, clammy sweats & a feeble pulse, & the usual stimulants failed to excite the system. Dr. Physick was called in consultation, & finding that the ordinary stimulants had been used to no purpose, proposed the spirits of turpentine: this was given in doses of 15 drops, frequently repeated, & succeeded most happily in exciting the system. Warmth was restored to the skin, action to the pulse, & the patient recovered. I have no doubt that the spirits of turpentine, in some prostrated cases of cholera, may be used with great benefit, especially when the spirited brandy has failed to produce the desired effect.

It is of great importance in the treatment of summer diseases, to be able to distinguish one from another. For, however we may be told that disease is a unit, yet I must confess that I am no friend to generalizing in practice. In order to illustrate my meaning, I will mention an instance which was related to me by Dr. Wistar. I have heard him say that one of the most important consultations he ever attended in all his life, was on an occasion in which he believed the life of an amiable woman was in danger, & when a few words from himself to the attending physi-

cian, were probably the cause of preventing a fatal termination to the case. The lady by severe cholera was reduced to the most alarming condition. A young practitioner was in attendance, who considered the disease a case of dysentery. He was treating it on the evacuant plan, & employed castor oil in frequent doses. When Dr. Wistar saw the case, & examined into it, he retired into another room with the physician, & all he had to say to set every thing right, was, "The disease is cholera, not dysentery." At once the plan of practice was changed, & the lady recovered. It was his opinion that a persistance, for a short time, in the plan which was then in operation, would have sacrificed a valuable life.

Before closing the lecture, I wish for a few minutes, to direct your attention to cholera as a prophylactic. Perhaps you may be ready to smile at the term, & to enquire how a disease of so dangerous a character should be instituted as a preventive of other diseases. But such is the fact: in the summer season there is a very strong tendency in the system to bilious accumulation, &, as a consequence, to febrile action. Hence, fevers in summer & autumn are frequent & dangerous. Now, I believe that cholera is nothing more than a salutary effort of nature to avert the impending evil. When fever has set in, what do we do to arrest it? we bring on an artificial cholera; we give emetics & cathartics to unload the system & clear out the alimentary canal. Nature does the same thing in cholera: the only differ-

ence is, that the physician performs his part more tenderly. Nature is a rough doctor; & sometimes in endeavouring to avert an impending evil, she causes a greater. Hence, we should always, as far as possible, keep her intentions in view, assist her, when proper, by mild means, & watch the time when it may be advisable to arrest her in the violence of her operations.

Cholera Infantum.

I shall now pass on to consider the disease which has received the name of cholera infantum. I shall simply define it to consist in the vomiting & purging of infants.—it is commonly called the summer complaint of children.

Among the principle causes of this disease, so often fatal to our infant population, I shall place extreme heat in crowded situations. This, in fact, is the chief cause of cholera infantum. Irregularities in diet, no doubt, contribute to the production of the disease, & place the system in a state to be more severely affected by it after it has commenced its attack. I am not aware that cholera is more prevalent in the latter than in the early part of summer, provided that the degree of heat is the same: whether it shall occur in the 6th or 8th month depends entirely on the temperature of these two periods. The summer of the year 1806 was remarkably healthy, & there was scarcely any disease, even in the 8th mo. It was an unusually cool & pleasant season; & it was to this cause that I attributed our exemp-

tion, in so remarkable degree, from cholera infantum. In summer a few hot days will produce many cases of the complaint; while, on the contrary, a few cool days will as soon arrest its progress.

The cholera of adults, I have told you, if properly treated, is, in this country, rarely fatal. When, however, the patient is worn down by previous disease, & his constitution much enfeebled, the complaint sometimes proves very serious: but in general it is easily managed. To children, however, cholera is a very fatal disease. You may be ready to inquire, "What is the cause of this"? I answer,- on the tender infant heat has a much more powerful effect, than on the adult who has for years been exposed to its influence. Let any one take a walk in hot weather through the dirty lanes & alleys of Philadelphia; he will witness many instances of little children reclining their heads, as if exhausted, on the necks of their mothers, with a pallid countenance, a cool & clammy skin, a shrunk neck, & other signs of debility, arising from their confinement during the night, in close & hot apartments. Another cause has great influence in rendering cholera so fatal in its effects.; I allude to the irritation of dentition. In fact, diarrhoea often supervenes on dentition, & is sometimes necessary to save the little sufferers from death by convulsions. Mothers & experienced nurses are well aware of this fact. But when dentition is superadded to cholera, in hot & crowded places, a fatal issue is often to be

feared. It is frequently from this cause that our attempts to cure cholera in confined situations prove abortive. I have often compared our endeavours to cure the disease, under these circumstances, to an attempt to remove inflammation in a part, while a thorn is sticking in it: we may resort to leeches, apply fomentations, poultices, &c., but as long as the thorn remains, the irritation will be kept up. Precisely the same reasoning applies to the case of the tender infant: while affected with cholera, if it continues exposed to the causes which produced the complaint, there can be little chance of giving effectual aid. Some die in a very few days with this disease, & convulsions are not an unfrequent occurrence at the close: others continue for weeks, gradually wearing away, till at last they die of exhaustion. Just before death, it is not unusual to see the eye suffused with red blood, resembling, in some respect, the appearance of inflammation. This is occasioned by a relaxation of the vessels, which allows red blood to pass into branches, that, in a healthy condition, only transmitted a colourless fluid.

Having given this outline of a disease, so fatal to an interesting part of the community, I now propose to give an account of the treatment, which I consider appropriate. And here I might open the subject with an expression of a very respectable practitioner, the venerable Samuel P. Griffitts, whose experience has been extensive.

One day, in the early part of my practice, I enquired of the Doctor what could be done to cure the summer complaint of children. He replied; "Lance their gums & send them out of town". This I consider excellent advice. But we often meet with cases, where from poverty or some other cause, it cannot be carried into effect; &, therefore, I must endeavour to give you an account of the treatment which I deem most advantageous.

When you are called to see a child much reduced, with a cool & clammy skin, a shrunk neck, &c., accompanied with constant vomiting & purging, - what is to be done? I generally commence with the chicken water. But the plan of dilution cannot be carried so far in infants as in adults: they do not comprehend the necessity of the treatment, &, therefore, cannot be made to cooperate with the physician. I have often found great advantage from the use of small quantities of Seltzer or soda water, frequently repeated. This remedy is refreshing & grateful to the ~~stomach~~ patient, & often allays the irritability of the stomach. I am in the habit of directing it to be put up in half ounce vials, one of which may be taken at a draught. In this way it is preserved fresh, which cannot be effected on any other plan. The sodaic powders will answer very well in country situations, where the mineral water cannot be obtained. The best method of preparing them is to dissolve a pa-

pos of the alkali & acid respectively, in different & equal portions of water, & then to mingle a dessert spoonful of each solution, whenever the remedy is to be administered.

Sometimes, however, the stomach rejects every thing which can be introduced into it; & in such cases, it is necessary to resort to external applications. These often produce very striking effects. The spiced plaster is an excellent remedy in cholera infantum: but as used in infants it is prepared somewhat differently from that which I mentioned to you I employ for adults. (See) In infants the pepper may be left out, or sparingly added.

It is now proper to produce some change in the secretions of the alimentary canal. For this purpose I have found the syrup of rhubarb an excellent remedy. The dose to a child 8 or 9 months old is a tea spoonful every two hours, till it changes the colour of the evacuations. Sometimes small doses of calomel may be given with advantage; one sixth of a grain every half hour or hour, is the proper dose, & may be repeated several times. I have not had much experience with this remedy in cholera infantum. It has been highly recommended by Dr. Ayre in his work on marasmus. But the practice is not original with him: Dr. Millar of N. Y. having long before recommended the same plan. In many cases I have found the rhubarb sufficient to effect the end desired.

After the operation of the rhubarb, or small doses of calomel, I have been disposed to restrain the evacuations by a mild julap, calculated to remove acidity, at the same time that it meets the other indication. It is the following:

Take Salt of Tartar . . ℈j
Laudanum, drops vi
Gum Arabic,
Loaf Sugar, ā ā ʒj
Cinnamon water, ℥jss

The dose is a tea spoonful, to be taken every 2 or 3 hours. If something more astringent is wanted, the cretaceous mixture will answer very well.

Take Prepared Chalk, ʒjss
Laudanum, drops vi
Gum Arabic,
Loaf Sugar, ā ā ʒj
Cinnamon water ℥jss

The dose is a tea spoonful every 1, 2, or 3 hours, according to the urgency of the symptoms. But great care should be taken to avoid arresting the evacuations from the bowels too speedily. In this complaint, I have found that the spiced syrup of rhubarb comes in very well, when you are in want of something calculated gently to evacuate the bowels, while it leaves a slight astringent effect behind it.

The feet & legs are often cold & clammy, & it is necessary that the child should wear woollen stockings. Attention to the warmth of the extremities is essential in this complaint.

But at the same time that we keep up action in the extremities, it is of the utmost importance that the child should have the benefit of cool air. In addition to this, knowing the influence which dentition has in perpetuating disorders of the stomach & bowels, it is obvious that the irritation, as far as lies in our power, should be removed. With this view, it is of great importance to lance the gums if they be swollen. Even if there should not be much swelling, it is best to lance them, as there can be no possible danger from the operation. Some physicians, however, think the operation improper before the gums are considerably swollen & inflamed: but I am in the practice of lancing them freely before they have attained this state, & thus prevent much suffering to the child. No possible harm can result from the practice. The objection often urged by mothers & nurses, & countenanced I fear by some practitioners, that after the wound has healed the tooth will find greater difficulty in passing through the cicatrix, than it would thro' the sound gum, is entirely frivolous & founded on incorrect views. You all know that new formed parts possess less vitality than original structure; & in consequence, they are much more liable to ulcerate & be absorbed. Hence, the cicatrix, so far from affording an obstacle to the passage of the tooth, is, in fact, favourable to it.

There is another circumstance to which I wish particularly to call your attention. When dentition is connected with cholera, after you have lanced the gums, I would advise you to apply blisters behind the ears. This is a practice which I

cannot too strongly recommend. I was led to it by observations on young children during the progress of dentition. At this period nothing is more common than to find ulceration behind the ears. Young practitioners & young mothers are apt to be uneasy at these unsightly sores, & to attempt to remove them. I tried this plan in my younger days, but experience induced me to abandon it. I have known the healing of these ulcers to produce unpleasant affections, which have been removed by restoring the sores: hence, applications made with a view to heal them are injudicious. On the contrary, when they are absent, it is proper to imitate nature by applying blisters to these parts. After the blisters have drawn, the parts should be dressed by some stimulating ointment with the view of keeping up the irritation. I will venture to assert that you will be surprised to see the good effects resulting from blisters when fairly brought into operation. They concentrate the irritation in the skin, & of course, lessen that of the gums, which is productive of such unpleasant consequences in cholera. In recent & low cases of cholera blisters may also be applied to the wrists with advantage.

Attention should be paid to the diet of the child. As the system is frequently much reduced, it becomes necessary to support it with nourishing food. For this purpose animal soups, as beef tea, essence of beef, &c., should be given in small quantities, & be frequently repeated. Weak milk punch is sometimes very useful. Dr. Wistar used frequently to recommend this article: but great care should be taken lest the use of

it should become habitual. Dr. Wistar once had a child under his care with this complaint, & advised the use of milk punch. The patient recovered, & he ceased his attendance. Sometime afterward, being in the neighbourhood, he inquired into the situation of the child, & was informed that the punch was still continued! When told of the quantity the child was in the practice of taking, he was really alarmed; so much had habit rendered him able to bear. Fortunately, however, he succeeded in breaking the habit, before it had become too much confirmed.

After the more early symptoms of cholera have subsided, I frequently direct an infusion of bark & cinnamon in lime water, in the following proportions:

Take Red Bark, coarsely powdered, ℥ss
Cinnamon, ... ʒij
Lime water, ... ℥viij

It should be suffered to stand a little while, & then decanted. A dessert spoonful may be taken several times a day. Port wine in small quantities is sometimes useful. The infusion of the dew-berry has been highly recommended by Dr. Chapman; but I cannot say much of it from my own experience.

You will remember that all these remarks apply to patients who cannot be removed into the country: but if this is practicable, it should always be recommended. I would those who cannot take their children out of town, to allow them as much air as possible. Frequently when in the

Dispensary have I directed the mother to go to the Center-Square, or to the State-House yard, taking with her her child & her work, & to remain there all the day in the shade of the trees: if they lived near the Delaware, I told them to cross the river, & remain all day with their children in the woods. In this way, I have no doubt, several lives have been saved. Happily, there now exists an establishment near this city, where mothers are allowed to take their sick children from their crowded & filthy situations, & have them properly attended to. Since this Institution was founded, the mortality of cholera infantum has, in the city of Philadelphia, greatly abated.

To the efficacy of the country air in this disease, I can bear testimony in the case of my own children. One of them was thought to be as far spent as it was possible to be without dying. Some of our friends thought he was so low, that to take him out of town would be an act of rashness. But I thought it of little consequence whether he died at home or in the country. The weather was very sultry; I fanned him as we passed along in the boat, & it was with difficulty that we could keep life in him. We arrived at his Grandfather's, near Burlington, about noon; & in the evening, while sitting under the piazza, the little fellow lying on his mother's lap, commenced paddling or playing with his hands, as he was accustomed to do when in health; & from this time he gradually recovered.

Cholera not unfrequently assumes a chronic form. The

patient escapes the danger of the first attack, but passes on into a state of extreme emaciation & debility. In this situation the little sufferer continues for weeks, & is finally relieved by death. With regard to this state of the disease, there are some striking facts which prove the advantage of indulging the child with that kind of food which nature impels it to desire. Very generally some kind of salt food is preferred. Dr. Wistar used to relate the case of a child who was brought into the parlour while the family were at dinner. It was extremely weak & seemed to be in the very last stage of cholera. It showed a very strong disposition for some ham which was on the table. The black skin covering the ham was the part which it seemed particularly to desire. It was gratified; & it did not discontinue sucking the piece till it had deprived it of all its nutritious juices. From this time it began to recover, & ultimately got well.

There was another instance of a child under similar circumstances, which seemed very anxious to eat some butter that was on the table. This child was also indulged, & it continued to devour the butter, lump after lump, till it had made way with the whole. From this time it was allowed as much butter as it desired, & under this plan it recovered.

I have heard of another well authenticated instance, where a child was reduced to the lowest ebb of cholera. In this state it showed a strong disposition for raw herring, which was granted to it. It was benefitted by the diet, & was afterwards plentifully supplied. So fond was it of the herring that it

always cried for more whenever its stock was exhausted, & was never satisfied without having one in its possession, which it kept pressed to its bosom.

Dr. Wistar was so convinced ~~full~~ of the importance of this practice, that he used to tempt his little patients with small slices of ham. Some would eat it; others seemed to have no desire for this kind of food. In the latter case he did not press it on them. I have often prescribed the essence of ham in those protracted cases of cholera. I direct the juice to be bottled up, to preserve it from becoming rancid, & to be used as occasion requires. Sometimes, in these little creatures the appetite is most voracious: this is by no means a pleasant symptom.

In the progress of cholera an aphthous state of the mouth often occurs, indicating a similar condition of the alimentary canal. This I regard as an unfavourable symptom: though one of the worst cases I ever saw with this affection, ultimately got well. Nothing seemed to do it so much good as a gargle of lime water & bark.

In some protracted cases of cholera, Dr. Griffitts is in the habit of giving scalded lemonade to the child; & in some instances with a very happy effect. He derived the practice from an old woman. Early in the disease we use absorbents: but in the last stage, the juice of the lemon often proves soothing to the patient, & useful in arresting the disease. It is also calculated to excite an

appetite, & thus contributes towards strengthening the system. The bark jacket is occasionally employed. Warmth should always be preserved on the surface, & for this purpose flannel next to the skin is important. At the same time the child must have the benefit of fresh air. But after all, the country air, so strongly recommended by Dr. Rush, will do more than the whole of the other remedies together; & will produce the desired effect, when all the rest have failed.

Here you may say that you have heard nothing of bleeding. I do not believe that cholera is a disease of inflammation. Whatever disposition of this kind may exist previous to the attack is removed by the copious alvine evacuations. Nature takes the lancet into her own hand & depletes from the exhalent vessels, quite sufficiently in most cases, & often too much. It may, however, be proper to take a little blood in some instances, when the disease is accompanied with difficult dentition: but even here great caution is necessary. In those severe cases in which you find a cool skin, shrunk neck, great prostration, &c., the lancet would certainly do more harm than good.

Before closing the lecture, I will make a few remarks on another part of the subject. Precaution is always better than cure. Heat & a crowded population are the principal causes of cholera. But how shall we remedy the heat? One of the most important points is to keep the windows

open at night. This recommendation would startle some medical men. "What! kill the children by sudden draughts of cold night air?" – I had rather see them die from this cause than from its exclusion. I have seen great advantage result from this practice. Compare two children treated in opposite modes: first look at the child of a parent who has a great dread of night air; most probably he is placed on a feather bed with his parents on each side, & almost smothered with the bedclothes; perhaps several other children are in the room, & the windows and the doors are shut. But look at him in the morning; you will find him limber as a rag, all his animation gone, without appetite, & just on the verge of an attack of cholera. Now look at one differently managed. Instead of a feather bed, he is put upon a matress & by himself; the windows & the doors are opened; plenty of fresh air, that pabulum vitæ, without which life cannot be sustained, is allowed him; & in the morning instead of exhibiting the sickly aspect of the other, he presents quite a different appearance. When I see the dread which some people evince of cool air & cold water, it would seem as if they were considered the most destructive poison, instead of being actually necessary to existence. They are, in fact, prophylactics very necessary to infants, & well calculated to ward off an attack of cholera. The cold bath as a preventive of disease I consider very beneficial.

Poisons Taken into the Stomach.

The importance of the stomach in the animal economy I presume is familiar to you all. I am now about to take notice of some of its acute affections. In my surgical lectures, I stated to you the danger which results from sudden violence to this organ. I mentioned that I had known instant death produced by a blow on the stomach of an apprentice lad, given by a fellow apprentice. I also noticed the case of a gentleman who from what I believe to have been spasm of the stomach, died in an instant. I shall now proceed to consider those morbid impressions made on the stomach by poisonous substances.

Effects of Arsenic.

Among the poisons which destroy life arsenic holds the most conspicuous place. The effects of a large dose of this article you can easily anticipate. By its corroding power it must certainly produce speedy dissolution. To illustrate its effects, I will read to you a case.

Case of J. – I was called 10th mo. 4th, 1816, to one of the principal clerks in a store in Market Street, who had swallowed three ounces of arsenic about half an hour before I saw him. He positively refused to have any thing

done for his relief, & resisted most violently when any attempts were made to force him to swallow. I attempted to wash out his stomach, but in vain. At last I told him if he would take what I should direct, it would make him die easier. This succeeded; & he drank off, at different times, at least two quarts of the albumen of eggs, & we got down some ipecacuanha: but the business was unalterably fixed – he died while I was with him. Drs. Matthieu & Monges, two very respectable French physicians, were also present. He must have suffered extreme agony. He made frequent efforts to vomit; his countenance was of a dark purple colour; he complained of being cold, & several times requested to be covered up warm. I suppose about one hour & a half elapsed from the time he swallowed the poison till his death.

In the afternoon, in the presence of the coroner & his inquest, also the two physicians already mentioned, I opened the body & took out the stomach. Every part of the villous coat was as completely cauterized, as if a red hot iron had seared it in every part. The intestines were just beginning to be highly inflamed; but the stomach was at once disorganized.

I wish here to make a few remarks relative to the improper or careless use of arsenic for the destruction of vermin – a practice which has in some instances been productive of serious consequences. A family in this city, some time ago, after eating

their dinner, were all, at least those of them who had partaken of a certain dish, affected with vomiting & distress of stomach. Happily the affection was slight, & they all recovered. In this instance there was every reason to believe that the disease arose from the following cause: The family had retired to the country on account of the yellow fever which was then in the city: but previous to their going out, some arsenick was spread about, & a plate of salt was suffered to remain uncovered on the dresser. The cook had seasoned the dish before alluded to with this salt, & there was every reason to believe that the rats in passing to & fro in the apartment, had frequently run over the salt & thus mixed with it the arsenick in which they had been treading.

In a family attended by Dr. Griffitts, I once saw several affected with vomiting at the same time; & in this case the sickness was supposed to have resulted from some rats having played in a barrel of flour which had been left uncovered.

A few years ago a very interesting occurrence of a similar nature took place in this city. A family, consisting of a number of persons, after partaking of their usual meal, were every one affected with vomiting, & some were extremely ill. The family physician, Dr. Neill, called me in consultation, & I soon saw them. One youth was more violently affected than the rest. On the preceding day he partook, with the family, of the food on the table, & was slightly affected: but not so as to prevent him from eating

breakfast on the following morning; & he was the only one of the family that did so. He thus took a double dose of the deadly poison, & the quantity was so large that the effects were fatal. These cases excited a great deal of alarm; & it was reported that the yellow fever had made its appearance in the house. Some of the friends of the patients stepped in, in order to render them assistance; & although they thought considerable care was taken, yet after a meal, they were taken ill. Possibly, however, this might have been the effect of imagination.

A legal examination as to the cause of death was instituted, & the medical attendants were called in for their testimony. I opened the body in the presence of the coroner & his jury, & found the stomach very red, & presenting such an appearance as we find in malignant fever: But from the preceding symptoms we had no doubt that he had come to his death in consequence of some morbid impression made on the stomach; & we supposed that arsenic had made that impression. Unhappily for a poor girl in the house, the master of the family was possessed of a mind of a very peculiar structure. Instead of being disposed to refer the whole to accident, he was obstinately under the impression that it was the result of design, & that some one had attempted to poison the family. In giving way to these impressions, he could find no one on whom to fix suspicion, but a servant woman in the house, who had a child in the family. He inquired into her character & found that

it was not a good one. This confirmed his suspicions, & he laid them open before the coroner's inquest. The coroner's jury was fully impressed with the suspicions of the master of the house, who was joined in them by his mother-in-law. This case will show you how important it is that the physician should keep his mind free from prejudice, especially on occasions when the life of a human being may depend on his testimony. After hearing the allegations made before the jury, Dr. Neill & myself, on our solemn qualifications, deposed as to the illness of the family, & among the rest, of the woman & her child. But such was the disposition on the part of the man to find her guilty, that our judgements were called in question, & it was suggested that she had feigned illness & deceived us. Hearing this, a thought suddenly flashed through my mind, which I related to the jury. I had observed that every one of the patients, affected with this complaint had a white furred tongue. I proposed that the members of the family, & the girl among the rest, should be brought before the jury, & undergo an examination on this point. The coroner & Jury were struck with the propriety of the proposition, & a display of tongues was accordingly made before them. The girl's was found to be as white, if not whiter, & more furred than any of the rest. This single fact was sufficient to influence the mind of the jury, & she was acquitted of the charge.

But the unhappy man, still pursuing his object with the eagerness of death itself, on his own responsibility, went before a magistrate & made such a declaration that it was thought right to have the girl arrested & thrown into prison. Here she was confined several months, & when brought before the grand jury was discharged on a verdict of ignoramus.

Effects of Laudanum.

It often happens that laudanum is given by mistake in such doses as to produce fatal consequences. This usually occurs among children. It is generally supposed by the vulgar that laudanum becomes weak in proportion to its age; & I blush to say that I have met with two medical men, in the course of my practice, who were of the same opinion. You must all be aware, on a little reflection, that laudanum, by the evaporation of the alcohol, is liable to become turbid, if long kept in a loosely stopped bottle. A portion of the opium is thus deposited, which was before held in solution, & consequently the mixture which remains must be a good deal stronger than the original laudanum. Hence, the danger of giving old laudanum to tender infants. I was once called to a very young infant, labouring under the clearly marked symptoms of an over dose of laudanum. On enquiring how much had been given, the moth-

or told me three drops. I was induced to suspect the correctness of her memory; but she insisted on what she had mentioned. Happily, I arrived in time to rescue the child. After its recovery, pursuing my inquiries, I went to the apothecary's where the medicine had been procured, & found that the laudanum had been poured off from the bottle in which it had been originally made. This was very imprudent, & nearly destroyed the life of the child.

I have seen two cases in which death resulted from giving an overdose of laudanum to infants of a tender age. A child was affected with catarrhal disease, for which its parents thought proper to give it laudanum. They had a bottle in which some of this article had been standing for a long time; & thinking that medicines lost their strength by keeping, they shook up the contents of the bottle, & gave what they concluded would be a proper dose. The child died in consequence. In the other case a neighbour gave the child what she thought a safe dose, but it so happened that it proved fatal to the tender infant. - I mention these facts, because I consider them of extreme importance in a practical point of view. So strongly am I impressed with this conviction, that there is not a family in the city, which I am in the habit of attending, to the members of which I have not explained my views on the subject.

Some medical men are not aware of the importance of caution on this point. I once met a practitioner in the country, in consultation; & it was concluded to give a dose of laudanum. I asked him whether his laudanum was fresh, & told him my experience with regard to it. He answered me very politely: but I perceived that he could hardly refrain from laughing at my timidity. I requested him to allow me to examine the bottle which he carried about him. I shook it & found a considerable portion of opium had been deposited. I pointed out to him one single flake which was floating in the liquid, & which, if given with a single drop to a very young child, would, in all probability, destroy it.

Opium in the form of laudanum is frequently resorted to with a view to suicide. I will mention some of the most prominent symptoms produced by an over dose of this article. When you recollect the sympathy which exists between the stomach & brain, you may readily conceive that an inordinate dose of opium must exert a powerful influence on the functions of this organ. Hence, in a short time after taking the laudanum, in half an hour or an hour, according to circumstances, the patient begins to feel its influence very sensibly; & if the dose has been large, stupor comes on. Along with this you very generally find stertorous breathing, &

another symptom of apoplexy - the slow, full & laboured pulse. Besides these, there is a livid colour of the countenance which does not always occur in apoplexy; but is an almost invariable consequence of an over dose of laudanum. So much is this the case, that I have been led to a knowledge of the cause of the complaint by this appearance accompanied with stupor, in cases where there was no reason to suppose that the patient could have attempted suicide. I think I have, in some instances, been struck with a pupil morbidly contracted. These, then, may be regarded as the prominent symptoms; & you will readily perceive that they very much resemble those of apoplexy, with the exception of the livid countenance.

I was, not many years ago, called in consultation with a very respectable practitioner, to see a young lady who, in his apprehension, was very singularly affected. It was early in the morning when I saw her. She had profound coma, stertorous breathing, & a livid countenance. One of my first impressions was, that the poor, unfortunate girl had been taking laudanum. I suggested it to the physician who thought that this was out of the question; & that, so far as he knew, there could be no cause of suspicion. I told him I should return soon, & wished him to prepare the family for some inquiries. Soon afterwards we commenced an examination of the room, & we pretty quickly discov-

ered, in the closet, a bottle which had contained laudanum; but was now nearly empty. The name of the apothecary was attached to it. A messenger was despatched to make inquiries, who, on his return, informed us that the young lady had, the preceding afternoon, procured the laudanum. There could now be no room for doubt. The case, however, had progressed too far for relief, & soon terminated fatally.

I will now proceed to consider the plan of treatment. Formerly, it was the usual practice to employ emetics; & enormous doses of these articles were sometimes administered. This practice, however, is often ineffectual when a long time has elapsed after taking the laudanum. I recollect in one case which I saw with Dr. James, the quantity of tartar emetic, ipecacuanha, & sulphate of zinc, which it was necessary to give before vomiting could be induced, would almost exceed belief; so torpid was the stomach, & so powerfully did it resist our attempts to make an impression on it. In this case, titillation of the fauces was also employed; some blood was taken from the arm, a tobacco poultice applied to the epigastrium, & the patient kept in a state of constant agitation. Ultimately, however, vomiting was brought on, & a recovery was effected. On the succeeding day, owing to the violence done to the parts, the patient laboured under a complete

attack of croup. From this case it may be perceived that, in some instances, the difficulty of evacuating the stomach by emetics, is exceedingly great, even though the most powerful may be employed: & therefore, no experienced practitioner will be induced to rely on them, when there are other means to which he may resort with a better chance of success. The means to which I alluded is the washing out of the stomach by the syringe & flexible tube. The use of these instruments, I have before explained to you in my surgical lectures. Yet, on some occasions, when we are unable to resort to mechanical means, emetics must necessarily constitute our main dependence.

It is here proper for me to remark that cases occur in which we may resort to mechanical means, to emetics, & other methods of evacuating the stomach; &, though we may succeed in this point, yet the patient will die. I had seen this several times without fully understanding the nature of the case. I mentioned it to Dr. Wistar who said that he had observed the same thing. To illustrate what I have advanced, I will state a case which fell under my observation.

To a child accustomed to receive laudanum when in pain, the usual quantity was given: but unhappily, of that turbid kind of which I have spoken.

I was called in, & succeeded in evacuating the stomach, & procuring a passage through the bowels; and entertained strong hopes of a recovery. Still, however, there was some stupor about the case; but the pulse was frequent, instead of slow. Supposing that this was owing to a small quantity of laudanum still remaining in the stomach, I gave another emetick which operated easily; but the child grew worse & worse, & finally died.

In another case an over dose was given to an infant in consequence of a catarrhal affection. In this instance also, I succeeded in bringing on vomiting, & with the same result. But death, in this case, seemed to proceed from a different cause than that just stated. I supposed that the vessels of the lungs were excited to a very high degree of action in consequence of the stimulus of the laudanum; that effusion had resulted, & that this had proved fatal to the infant — The same thing occurred in a child whose stomach I had washed out. Here I also believe death occurred from effusion.

But the cases to which I wish particularly to call your attention, are those in which the stomach & bowels have been evacuated, & yet the patient sinks from debility. I will relate two instances. The first, as you will perceive, terminated fatally; but so long a time had elapsed before any medical treatment was resorted to, that there was no chance of success.

I have several times seen this in practice. There is a certain point when the mischief has been accomplished; disorganization has taken place, & after this all efforts to afford relief are vain.

Case 4. – Sixth mo. 8th, 1818, I visited on Cooper's Creek, an amiable young woman, the daughter of respectable & affluent parents, who in a paroxysm had taken two ounces of strong laudanum. Dr. Hendry of Haddonfield was called in the first instance & despatched a messenger for me. The Doctor tried to excite vomiting by tartar emetic. He also gave the citric acid very freely, & employed a tobacco injection which, however, was directly returned. Her pulse, he said, was slow, her countenance livid, the action of her carotids very powerful. He bled her twice before I saw her, & evidently, he said, with relief. But such was her deplorable condition, that before the last bleeding, she lost, according to his account, the power of speech & deglutition. When I saw her she was capable of understanding what was said to her, & gave replies that manifested it: but her countenance was ghastly & inclined to the livid hue; her pupils much contracted; her pulse full, strong & rather frequent; her respiration was laboured – her shoulders appeared to rise too much in breathing. I introduced a flexible tube into her stomach, & by the use of the syringe, aided by the efforts of the stomach itself, I was enabled to wash it out completely. While we were engaged in this process, the patient

improved most astonishingly. Her intellect became perfectly clear; & she told me how she accomplished the act; declaring she was not conscious what she was about, or rather, that she knew not why she acted as she did. She said that she knew that it was laudanum, & did not wish to take it; & yet it seemed, she said, as if she must do so, & then she took it. There appeared nothing like fixed design to injure herself. She seemed very uneasy about her little sister who was with her at the time. She said that she was afraid she had given some laudanum to the child, which did not appear to have been the case. This was a proof of her not being aware of what she did.

I continued washing washing the stomach for at least an hour, as she appeared to bear it very well. I used warm water & chamomile tea: after this I injected castor oil through the tube, as I calculated that a good deal of laudanum had passed into the bowels. I then withdrew the tube, & proposed a strong injection of salt & water. Sinapisms had been applied to the feet before I saw her, & as I calculated on a good deal of debility, I proposed to Dr. Hendry to apply a large mustard plaster over the stomach; & informed him that I had known some cases very deceptive, & dangerous in the extreme, after they had appeared very flattering. I proposed his being on his guard, ready to throw stimulants into the stomach, if the symptoms of debility, which I expected, should become alarming. I then went into another room, & being

much fatigued, I sat down & took a dish of tea: when I left the patient she was sitting up in bed. After tea I found her pulse very frequent, & she was evidently changed for the worse. She complained of being very dry. In a very few minutes after this she was in a state of great restlessness & delirium, endeavouring to walk about the room. She now had subsultus tendinum, & her pulse could barely be perceived. I proposed the free use of volatile alkali, warm, stimulating drinks, &c. &c. I left her under painful apprehensions; & she died in a few minutes after I left the house. – The laudanum was taken a little after 10 o'clock, P.M. I saw her about 7 o'clock in the evening: no vomiting had been excited before I saw her. If I should have another similar case, I will not persevere so long in washing the stomach, & will resort earlier to stimulants, such as ginger tea, brandy toddy, &c.

I will now relate to you another case which terminated differently, & in which I derived great advantage from my previous experience.

Case 2. – On the 4th of 11th mo. 1818, about 11 o'clock at night, just as I was about preparing for bed, I was summoned in great haste by a dry-good merchant, rich, & so far as I know, respectable, to see his wife, a middle aged woman who had taken about one ounce of strong old laudanum, equal perhaps to two ounces of common laudanum, with an intention to destroy herself. – The name I scrupulously withhold, from a settled determination to avoid handing down to posterity events which ought, so

for as regards the patients & their families, to be buried in oblivion. For, who can calculate on the distress & mischief that a physician in extensive practice may occasion by indiscriminately recording, or in any way giving publicity to the names of patients who, from various causes, may be brought into conditions which religion & humanity are called on to deplore! On arriving at the house, I found a scene of confusion & distress. The unhappy woman was in bed with two of her infants – the elder, I suppose, under 4 years, the younger under two years of age. The noise & confusion attendant on their mother's condition had roused them from sleep. The elder wept, unconscious of the cause; the younger was sitting perched up in bed, looking innocently at the mother & those around, &, happily, unaffected by the atmosphere of woe by which it was surrounded. The poison was just beginning to develope its effects: the countenance of the patient was suffused to a great degree; the temporal arteries were remarkably tingid; the pulse at the wrist, slow, full, & strong. She was not yet wrapped in profound coma: she was very averse to being disturbed: she wished to sleep, & when she slept her breathing was stertorous. Finding her in such a state, I called on Dr. Wood, who lived near the patient, to assist me; & I proceeded at once, with his aid, to wash out the stomach. She appeared somewhat disposed to resist, at first, but as it was an important moment for her, I tried to appeal to her in strong language, & endeavoured to rouse her feelings & to recall a love for life. She was capa-

ble of understanding what was said, & would give rational answers. I found the most assailable point in her distracted mind was the subject of her children, & here I assailed her with all my force. Happily, maternal affection burst through the gloomy shades which surrounded her, & I obtained from her a declaration that she was willing to live for the sake of her children. I introduced a long flexible tube through the nose, & by the aid of a syringe I soon drew forth the laudanum. I now injected warm water freely, & by discharging it from the syringe into a white basin, I was enabled to perceive when it was colourless. After repeated injections of warm water, it was, at last, returned quite clear. As her countenance was still very much suffused, & her pulse slow, full, & strong, I opened a vein in her arm, & she lost about one pound of blood. Cold water was applied to the head & dashed into the face with good effect. Her countenance became more natural; but she was very difficult to rouse. Our attention was now directed to the stomach; well knowing that as it had so lately been subjected to a powerful narcotic impression, the sudden abstraction of such a cause might be succeeded by atony or spasm which would be productive of great danger. To counteract this, a large sinapism of pure mustard with vinegar, was applied over the stomach; sinapisms were also applied to the legs, & strong ginger tea with the sp. cornu cervi was given by the mouth. At this time her face was pale & her skin cool. There was a great diminution of ex-

citement, & her stomach was so torpid, that she could scarcely feel any effect from a wine glassful of ginger tea with two tea spoonsful of sp. cornu cervi added. The tea was given quite warm. In the course of about half an hour, I suppose she took, in divided portions, as much as half an ounce of the sp. cornu cervi & half a pint of ginger tea. She complained very much of feeling cold, particularly about the ankles. Hot irons were applied to her feet, & I directed fictions of hot brandy & very strong cayenne pepper to her legs, thighs & arms. All this did not appear to produce any effect. She was still cold; but was more easily roused & when awake talked very sensibly. She seemed very grateful for the efforts that had been made for her recovery; but still her skin was preternaturally cool. Some warm brandy & water was given several times, & tapioca or sago seasoned with brandy was directed. A little after 8 o'clock, I left her under the care of my young friend, Dr. Wood, we having jointly concluded to continue the efforts for producing reaction of the system. Next day I found her with complete reaction & some fever. The parts to which the sinapisms had been applied became very much inflamed, & several days elapsed before she regained her former health.

I had a long private conversation with this poor, afflicted woman, in which she gave me a detailed description of the temptations to suicide which had assailed her for several years; & I was particularly struck by her stating to me that on one occasion hearing of a lady who destroyed her-

self (she was a patient of mine affected with insanity) she felt after this, the temptation stronger than ever – it was almost irresistable. This confirms me in what I have long believed, that the practice of giving publicity to cases of suicide, is radically wrong.

From these cases, (& could adduce others,) you may understand the very great importance, where a powerful impression has been made on the stomach by laudanum, of recollecting that after great exertion there is apt to succeed a state of corresponding prostration; & that, after removing from the stomach the offending cause, you should not wait for debility to come on, but should anticipate it by appropriate treatment. The volatile alkali, ginger tea, wine, brandy, &c., are very suitable in these cases, especially the volatile alkali & ginger tea, as they possess no narcotic power, & produce in consequence no injurious influence on the brain. Laudanum possesses this power, & therefore would be improper to counteract debility produced in this way. An anecdote related by Dr. Wistar has a bearing on this point, & exhibits, in a strong light, the sagacity of the celebrated Dr. Cullen. A fellow student of Dr. Wistar, in Edinburgh, took several drachms of laudanum for an experiment; he then showed himself to his fellow students, used a good deal of exercise, & in the evening, after the stimulating influence of the laudanum, he attended the theatre. Here he fell into a fainting fit – his com-

panions thronged about him, & held a consultation as to what was to be done. Some thought, as the debility resulted from an absence of the stimulus of the laudanum, that some more of this article should be given. Happily, it occurred to them, to resort to Dr. Cullen, & to state the case to him. That great man made this pithy remark. "Why give an antispasmodic or stimulant possessing narcotic powers, when you are able to resort to others without them?" He sat down & wrote a prescription for musk. This was given & the student recovered.

In this place I will make another remark relative to the treatment of these laudanum cases. We are very apprehensive of apoplexy, & there is, perhaps, some reason to be so. But I consider the appearances presented by a patient labouring under the effects of laudanum, to be essentially different from that disease; & therefore, recollecting that we have to contend with a state of things in which the patient is liable to sink into great debility, we should be cautious not to abstract blood too largely. Unless the symptoms of compression of the brain were very urgent indeed, I should not, with my present views, abstract a drop of blood. Those profuse bleedings which are necessary in idiopathic apoplexy, are not judicious in the cases of which I have been speaking. A case is somewhere recorded of a patient who narrowly escaped from death, when laudanum had exerted its full influence on the stomach. No physician was called till all the primary effects

of the laudanum had gone off, & nothing remained but very great prostration. Stimulants were then administered & the patient recovered.

In ordinary cases, the proper method of proceeding is to empty the stomach by the tube, or by emetics, & then to obviate the debility which is apt to follow by stimulating treatment. The same remark will apply to those cases in which ardent spirits have been taken in large quantities. I have seen several instances where death has been suddenly produced from this cause. A poor unfortunate vagabond, already in a state of intoxication, undertook for a wager to drink a pint of brandy. He did so & death was the consequence. I have seen a child brought to the very brink of the grave by ardent spirits incautiously taken - I washed out the stomach & he recovered. Not long ago a gentleman who was accustomed to take a certain quantity of laudanum at night, before going to bed, & who also was sometimes off his guard & took spirituous liquors in too large quantities besides, spent an afternoon & evening in the billiard-room, & drank occasionally with the others. At bed time he was in a state of intoxication, & unfortunately took his usual dose of laudanum. The effect of this superadded to that of the ardent spirits was fatal; & in the morning he was found dead in his bed.

Dr. Brown, the celebrated author of the Brunonian Doctrine, was an example of the same kind. Dr. Barton who was one of his students, used to relate, that after one of his

lectures, Dr. Brown complaining of being fatigued & indisposed, was told that this was a proper opportunity for testing the correctness of his theory. He accordingly went home & took a dose of brandy, which he followed by another of laudanum; & so went on drinking brandy & laudanum, till his frame could bear no more, & his death was the consequence.

Enteritis.

This, as you all know, is employed to signify inflammation of the bowels, & may answer very well as a general term. But I here to call your attention to a physiological remark: Bichat has contributed very much to extend our knowledge of diseases, by his observations on the particular structures of the body. When we recollect the extent & influence of these various structures, distributed over various parts of the system, we are enabled, in some measure, to explain the remote sympathies we meet with in practice; & it is no longer wonderful how impressions made on certain parts, with a view to the curative process, may operate on others very distant. With these prefatory remarks, I shall take up the consideration of inflammation of the bowels, & shall treat of it as attacking the particular structures which compose this part of our system.

Peritonitis.

In the books you will read of inflammation of the peritoneum, of the omentum, of the peritoneal covering of the liver, spleen, &c.: but, in fact, these are all the same disease, as they involve the same membrane. The peritoneum, you know, is a serous membrane lining the internal cavity of the abdomen, investing the stomach, intestines, liver, spleen, mesentery, &c.; & by its folds forming the omentum, the mesocolon, & other structures to be met with in the abdomen. Now the inflammation of this membrane is essentially distinct from that of the mucous membrane, lining the stomach & intestinal canal.

The evidences of peritoneal inflammation, as manifested by its symptoms during life, & by dissection after death, are such as I shall state to you: The coagulating lymph being thrown out from the blood, produces very serious consequences. That this is the case is satisfactorily proved by referring to what is observed on dissection. We find almost the entire mass of the intestinal tube, in many instances, in a state of adhesion. I will here remark that peritoneal inflammation is much more to be dreaded, than inflammation of the mucous membrane. It affects a part which, as Dr. Rush used to say, has no back door – no passage for the discharge of redundant secretions.

Idiopathic peritonitis, or that arising without the infliction of any injury on the part, as far as my experience has gone, is a rare disease. You will easily understand,

that it may frequently occur as the consequence of wounds, bruises, strangulated hernia, &c. It is also said to be an attendant of puerperal fever. Of this I have little experience, & shall, therefore, say little. But I now speak of pure peritoneal inflammation, occurring without any injury to which the parts may have been subjected. This, though not a common disease, I have occasionally met with in practice. It is attended with fever, a great deal of pain & distress, & much tenderness on pressure. Along with these, there is sometimes a pulse of a very peculiar character, which may deceive a young practitioner, & lead him into bad practice. In my lecture on the pulse, I referred to some cases of peritoneal inflammation. I mentioned the case of a lady whom I saw on the recommendation of Dr. Mongus, whose pulse was so weak that I was afraid to use the lancet. But consulting Dr. Mongus, who had been in the habit of attending her, I was informed by him, that nothing but the lancet would answer, & that she would bear it very well. I used it & with the happiest effect. I also mentioned the case of a young lady, who had a weak pulse, but was affected with pain & tenderness in the abdomen. I directed her to be bled; but the bleeder, after taking a small quantity, said that she would not bear the loss of more without fainting. I bled her myself; the pulse rose under the lancet, & much benefit resulted.

These cases prove that the pulse, in peritoneal in-

flammation is not to be relied on. If a patient be affected by chill, succeeded by fever, with pain & tenderness of the abdomen, even though the heat of skin & strength of pulse may be absent, yet I would advise you cautiously, in the first instance, to try what would be the effect of abstracting blood. Mere tenderness of the parts, however, is not a sufficient warrant for employing the lancet. Some cases of dyspepsia & cholic are accompanied with tenderness of the abdomen, without, I believe, the slightest degree of inflammation. It may result from distension of the bowels by flatus, or it may be simply the soreness, which, in every case, is apt to succeed spasm of the muscular fibre. There is a necessity for great delicacy of judgement in deciding between the two affections. If you find the tenderness occurring in a dyspeptic patient, especially if he has been eating some flatulent article of food, & by striking the abdomen, you perceive the existence of flatus, you should be cautious how you resort to the lancet. Suppose then you are called to a patient who has been suddenly attacked with severe pain & tenderness in the bowels, with great anxiety & distress of stomach; & on examination, you find the tongue furred; suppose that these symptoms continue, the pain & tenderness increase, accompanied with restlessness, thirst, heat of skin, &c.; and at length, the patient suddenly obtains relief – under these circumstances you may very safely conclude that you have had a case of peritoneal inflammation. The sud-

den relief sometimes experienced by patients with this complaint, is apt to deceive the unexperienced practitioner, & induce him to believe that the violence of the complaint is past. But the skillful physician, when he examines the pulse & finds it exceedingly feeble, observes the hippocratic countenance, & the cool clammy sweat bedewing the whole surface of the body; & at the same time sees that the patient & his friends are deceiving themselves with the hopes of a speedy recovery, will feel it his duty to inform some of them, at least, if not the patient himself, that they are labouring under an error, & that they must prepare themselves for a speedy & fatal termination. Either mortification has taken, or, if not this, something like suppuration has occurred over the whole surface of the peritoneum. But this does not invariably happen. I have known violent pain & anxiety amounting even to agony, in several cases which terminated fatally, to continue to the very last moment.

The disease, in some instances, may approach very insidiously, may make fatal inroads into the system before the patient & his friends are aware of the danger; & I have met with one case to which I was not called till the fatal stroke was given.

Having taken this view of the symptoms of peritonitis, & of the general appearances on dissection, I will devote a few minutes to the practice. You may easily suppose that the lancet is indispensable. In some instances V.S. must be

carried to a considerable extent. In addition, it is proper to unload the bowels of any feculent matter contained in them. What cathartic shall we select? Shall it be of a mild or drastic character? For my own part I have thus far depended on the milder cathartics, as the neutral salts, castor oil, &c. Together with these I administer demulcent drinks, as barley water, flaxseed tea, &c., & direct large injections of the same articles to soothe & quiet, & to give, as it were, a warm bath to the intestines.

But there are some diversities of practice. In accounts from the other side of the water, I learn that the spirit of turpentine is largely administered, with happy effects, in cases of puerperal fever. Here I am on untrodden ground, & therefore, cannot speak positively. The modus operandi of the medicine, as stated by some of those who recommend it, is, that it acts by stimulating the lining membrane of the intestines to increased secretion, & thus indirectly proves a depleting remedy. You must recollect that I am now stating the opinions & experience of others. I confess I have had views somewhat analagous with regard to the operation of the Senka snakeroot in croup. I have supposed that it might first stimulate the mucous membrane of the bronchia, & that this effect might be followed by a copious secretion. But you must remember that in croup we at the same time freely employ the lancet. Among those who depend on turpentine in the management of puerperal fever

venesection is little or not at all resorted to.

Besides the remedies mentioned, local depletion by means of cups or leeches, is of great importance; & counter impressions by the use of fomentations & blisters should not be neglected. With regard to fomentations, we should be regulated by the feelings of the patient. If he should be relieved by them, they must be continued; but if no such effect is produced, they should be laid aside. In the case of the young lady to which I have before alluded, friction of turpentine, over the whole surface of the abdomen, were employed, & continued so long that slight vesication was produced. Dr. Dewees thinks that spirits of turpentine thus applied, is better in puerperal fever, than even blisters. But I have great confidence in the flies, in peritoneal inflammation, & a large blister over the abdomen is an important remedy.

This is a general outline of the necessary practice. It must be left to the practitioner to fill it up, according to the particular circumstances of the case. Sometimes the warm bath may be advantageously used, united with other remedies calculated to bring on determination to the surface, & cause a relaxation & softness of the skin.

I have stated that peritoneal inflammation sometimes approaches very insidiously. In illustration of this fact I will now detail to you two cases which have a bearing on the subject.

Case.— S. W. wife of E. W., about 40 years of age, was safely delivered of her second child about 6 weeks before her death.

Dr. James attended her on the occasion. She was remarkably brave for the first 3 weeks; but soon after this she complained of pain in the abdomen, & had some tenderness on pressure. For these symptoms, Dr. James directed her to be bled several times, used cathartics, &c. Under this plan she was greatly relieved, & recovered so far as to get down stairs, & even to ride out. But the Dr. had very properly directed that the ride should not be repeated, unless she was evidently sensible of being the better for it. This appeared to have been the case; for she repeated the ride the next day, the 25th of the 12 mo. On her return that day. she had a good appetite, & at dinner ate pretty freely of beets & vinegar. About 12 o'clock that night she was attacked with violent colic. Dr. James saw her in the morning. His efforts were directed to vacuate the bowels & allay pain. Various expedients were adopted without success. Her stomach was exceedingly irritable, & her bowels obstinately confined. On the evening of the 27th, I was called in consultation. At this time her pulse was extremely frequent; her vomiting appeared bilious, & even stercoracious; there was restlessness and distress without any pain; her abdomen was very tumid; her tongue quite moist & natural. I proposed a trial of Fanning's steam bath, also an anodyne enema to compose her. A blister had been applied to the abdomen. I examined carefully to ascertain whether there was any thing like incarcerated hernia, but found none.

Some purgative pills prescribed by Dr. James were continued. On visiting her again that night, I found her situation not improved; though the baths had proved very grateful, & the enema had relieved her, yet her pulse was extremely frequent & feeble; she was covered with perspiration; there was a total absence of pain, & a decline of strength, with obstinate constipation. Various injections having been used by Dr. James, we concluded to give her some calomel & opium for the night, & left her with very anxious feelings. On the 28th we saw her in the morning, & several times afterward; but we saw her a dying patient — Her nails were livid; her pulse barely perceptible; though her intellect was as clear as a cloudless sky, & she displayed, in a remarkable degree, the power of true religion upon the mind. She departed about 2 o'clock, A.M., about 20 hours after I first visited her. — I ought to mention that my beloved friend, Dr. Griffitts, was called in about 2 hours before her death. On the succeeding evening, in the presence of Drs. Griffitts & James, I made the following dissection:

On opening the abdomen, I found a complete and universal adhesion of the intestines, in consequence of peritoneal inflammation. A small quantity of lymph, of a purulent appearance, was found in the cavity. The left ovarium was enlarged — I imagine its cavity would have contained a pint of fluid. On

opening this ovarium, I found the remains of a fœtus – a part of the jaw with several teeth, & a considerable quantity of hair. The hair was quite long, & the whole was enveloped in a mass of sebaceous matter.

Case of H. – The other case to which I alluded was that of the son of Mr. H. of this city. I was not called to attend till medical aid was unavailing. For a week previous to his death, he complained of pain in his belly; yet he came down stairs, and kept about. But the pain & distress must have been great; for whenever he attempted to walk, he went in a bent posture. The parents were not aware of his critical situation, till a short time previous to his death. Soon after I saw him the pain subsided: but I marked the symptoms which, in these cases, are the sure precursors of dissolution.

On dissection, the appearances were very similar to those presented in the preceding case. There was not so much adhesion; but there were marks of universal inflammation of the peritoneum, & effusion resembling purulent matter.

In the same family, soon after the death of the boy just mentioned, a younger brother complained of pain in his bowels; & though I should have been disposed to treat it as trifling, had it not been for the other case; yet with this before me, I bled him seven-

al times, & had the satisfaction of seeing him recover. I believe had it been left alone, the case would have pursued the same course as the preceding.

These instances evidently show that the disease may make its attack very insidiously, & that the least signs of it must be promptly met by the practitioner. I will read you another case which tends to illustrate some points relative to this disease.

<u>Case of Peritoneal Inflammation & Peripneumonia Notha.</u> — On the morning of the 2nd of 2nd mo. 1811, I was requested by O. C. to visit a servant girl in his family, aged 16 years. On inquiry it appeared that she had been affected with a cough for some days, but not so severe as to confine her. On the 31st of 1st month (two days before I saw her,) she complained of pain in the abdomen. In the night she was seized with violent vomiting. Next day she appeared better; but became worse again at night, & the family feeling uneasy respecting her, I was called in. I found her complaining of severe pain in the abdomen, which was extremely tender to the touch: She also experienced some pain in the shoulder & back. Her countenance indicated great distress, & her breathing was rather laborious: but the affection of the breast seemed lost in the acute suffering which she referred to the abdomen. The pulse was rather contracted, some-

what tense & frequent. Her bowels were constipated, & had been so for several days: her tongue was moist. I directed ℥j of castor oil every 2 hours, also occasional injections, containing ℥ij of the sulphate of soda. Twenty ounces of blood were ordered to be taken from the arm. In the afternoon, I was informed that she felt easier for about an hour after bleeding: but the symptoms had now returned with all their former violence. I directed a continuance of the oil & injections, & 16 oz of blood to be taken, provided the patient should bear it well. At 10 o'clock at night, I saw her again, & was informed that she did not bear the abstraction of more that 10 oz, & nearly fainted when this was lost. The bleeder said he could get no more. Her bowels were still constipated, & every former symptom of danger remained unabated. A very large blister was now directed, which covered the whole abdomen. The oil was also ordered to be given occasionally through the night, as her stomach should be found to bear it. Next morning I found her asleep, & as the blister was to remain on until 12 o'clock, I did not disturb her. On seeing her after the blister was dressed, it was very evident that no salutary impression had been made on her system since the preceding evening. The bowels continued constipated, notwithstanding all the oil, injections &c., & she had some strangury. I directed

a very strong infusion of senna with sulphate of soda dissolved in it – a tea cupful every hour; also soda water to relieve the strangury. The pulse seemed to forbid bleeding. About 10 o'clock at night I found her in a most alarming condition – the pain in her abdomen was extremely severe; her countenance indicated great distress; her wrists were cool; her pulse was slow, easily compressed, & evidently sinking; her tongue was clammy, but brown. She had vomited repeatedly since I last saw her. She was very restless & thirsty, & her bowels were still constipated. I directed a warm bath, & afterwards a renewal of the blister over the abdomen, as the first had not drawn very well; also calomel in pills – two grains every 2 hours, instead of the senna: I likewise directed a camphor julap, with laudanum, to be taken occasionally, when very restless, & an enema composed of venet. turpentine ℥j, suspended in a pint of the mucilage of gum arabic.

4th. – I was informed this morning, that her stomach rejected every thing: of course no medicine of any consequence had been taken since my last visit. Her countenance was now hippocratic; her wrists cool, & her pulse almost gone. She had great pain & restlessness, & vomited very dark coloured bilious matter. Attempts were made to allay the irritability of the stomach by lime water and milk, seltzer water, &c. &c.; but all to no purpose. An anodyne enema was directed, which seemed to lull a little;

but about 2 o'clock death relieved her of her sufferings. She complained of pain to the last.

Dissection about 22 hours after death exhibited the following appearances: The omentum was found spread over the intestines & closely agglutinated to them by adhesive inflammation. The texture of the omentum was more tender than natural. The small intestines were found very closely adhering to each other - their anterior surface, particularly, being covered with a coat of coagulating lymph. Several ounces of fluid, probably 8, were effused into the cavity of the abdomen: it appeared to be a mixture of pus & serum. The intestines in several parts, seemed inclined to a dark gangrenous colour: this was especially evident in the cæcum. The whole intestinal tube, as well as the appendicula vermiformis, was distended with flatus & liquid fæces. The convex surface of the liver was agglutinated to the parietes of the abdomen & to the diaphragm, in consequence of inflammation. The stomach was considerably distended with flatus, & contained some dark coloured matter. The thorax, particularly on on the left side, contained an effusion of bloody coloured serum; & into the cellular texture of both lungs, there was a considerable effusion of blood. In some parts small portions of coagulated blood were apparent. The heart appeared natural, but very small.

Remarks. - Is it not probable that the adhesions between the small intestines, & also their agglutination to the

diaphragm, prevented this peristaltic motion, & in this way induced constipation? Does not this prove the propriety of lenient cathartics in such cases? Had peritonal inflammation simply produced death, it is probable that the patient would have lived several days longer, & would have been quite free from pain several hours before death. May not the catarrhal affection which terminated in peripneumonia notha, be deemed the more immediate cause of death?

Now, in reviewing the practice in this case, I believe it might have been amended. I think it would have been better to have carried the plan of depletion to a greater extent. But at that time I had not so much experience as at present, & the fainting at the second bleeding induced me to refrain from ordering a repetition of the operation. If I had another similar case, I should bleed freely, & should operate myself instead of trusting to a bleeder. There was one circumstance that contraindicated the very powerful use of the lancet. The difficulty of respiration was such as to induce the suspicion that effusion had taken place in the lungs; & under these circumstances it would be improper to carry V.S. to such an extent as might otherwise have been advisable. — In this case we are presented with an often suspected cause of constipation, viz. adhesions of the bowels to each other, in consequence of coagulating lymph being thrown out by inflammation.

Before closing the subject of peritonal inflammation,

it will be proper for me to call your attention to another very interesting subject; & in doing so, I will make this remark: Practitioners should be very careful not to suffer their minds to be biased by preconceived opinions. You should observe, & record your observations, though they may contradict your theories. Now we have been accustomed, & very properly, to consider the inflammation of the bowels, which is wrought on dissection by the presence of effused coagulating lymph, as a proof of high inflammatory action in the system. When on examination after death, we find such effusion, we conclude that so much inflammation must have required powerful depletion by the lancet. I will now state, that, by dissection we may find these adhesions in consequence of the effusion of coagulating lymph, yet at the very time it took place every thing like depletory treatment was forbidden. This only goes to show that exceptions may occur from constitutional peculiarities; & that these should never be converted into general rules applicable to other cases. However contrary to theory, such is the fact, that the blood vessels of the serous membranes can take on such kind of action as may induce effusion of coagulating lymph, when, instead of an inflammatory condition of the system, a state of extreme debility exists; & that this effort is as much an act of expiring nature, as the production of black-vomit in yellow fever. To prove this, I need only refer you to the case of P. W. (See Diseases of the Thoracic viscera, vol. page)

By a long course of suffering, her system was gradually worn out; dropsy was the result; we were looking for death for months before it occurred, & just as she was brought down to the lowest state of existence, she was attacked with violent pain in the abdomen, & in that condition of distress & agony, she expired. Upon examination after death, it was found that the small intestines exhibited evident proof of recent inflammation. They were of a dark red colour, & a small quantity of recent lymph had been effused. Some serum also was found in the abdominal cavity.

But a case much more extraordinary was that of A. K. (See vol. page) He became dropsical, was reduced to a state of emaciation really wonderful, &, in the last stage of life, was attacked with pain in the abdomen. On dissection, after removing about a bucket full of serous fluid, the viscera were brought into view. The omentum was indurated & diseased; the small intestines were agglutinated in many parts by slight adhesions resulting from the effusion of recent lymph; the liver was covered with a similar coat; the pylorus was greatly enlarged & indurated, and other morbid appearances were presented.

These cases are rare, & have seldom been noticed. Dr. Price tells me that the fact has been mentioned by Bichat in his lectures to his class, in Paris. These cases go to prove the correctness of the opinion advanced by Gregory, in his essay on inflammation. He thinks inflammation may oc-

cur in cases attended with extreme prostration, in the very last moments of life. And I am of the opinion that we fall into a great error when we resort to bleeding to prevent inflammation previous to performing surgical operations: for so far from preventing it, I believe, as I stated on a former occasion, that it induces a state of things calculated to favour the production of inflammation.

Having spoken of Inflammation of the Peritoneal membrane, I will now go on to consider that of the mucous membrane. The mucous membrane is very extensively diffused. It commences at the mouth & nares, & after lining these two cavities, part of it extends down the trachea & accompanies all the ramifications of the bronchia, while the other part lines the œsophagus, stomach & intestines, & terminates at the anus. Inflammation of this structure is a frequent cause of disease. At present I shall confine my observations to that portion of it which constitutes the lining membrane of the alimentary canal. There are various kinds of morbid action which may take place in this particular structure. In some cases of dyspepsia, particularly among intemperate people, & occasionally among persons of temperate habits at a late period of life, there is an erythematous condition of the alimentary canal, as indicated by the red & smooth tongue. This may generally be considered as a fatal symptom in diseases of this description. But there is an in-

flammatory condition of the mucous membrane, more common than this, which forms a conspicuous symptom in a disease of which all of you have heard, & some of you have seen; I allude to

Dysentery.

This is a disease in which inflammation of the mucous membrane of the intestines is very strongly marked. You may very naturally inquire, – What evidence have we of this particular affection of the mucous membrane? By referring to the symptoms of dysentery, you can have no doubt of the fact. Let us consider what takes place in inflammatory affections of the Schneidrian membrane. There is first a serous discharge with sneezing, & at last a more concrete or thickened mucus is secreted. The same thing occurs in the pulmonary system; and when resolution is about to take place, we find a thick mucus thrown off from the lungs. In the mucous membrane lining the intestinal canal, the case is a little different. When inflammation attacks this part, we do not have so much thin, serous discharge, as from the nose; but still, the secretions are evidently increased. This leads me to remark that inflammation of the serous membranes is more dangerous than that of the mucous; because the latter, as it were, carry the lancet in their own hand, & are capable of depleting

themselves. When, therefore, inflammation invades this part of the bowels, the vessels secrete more freely & the patient discharges great quantities of mucus and sometimes blood. You are aware that a little increase of action in the arteries of the nose induces epistaxis; the same thing occurs in the alimentary canal.

Dysentery is better understood by the practitioners of the country than by those of the city. In the country the disease is often epidemic, prevailing almost universally, & is sometimes very fatal in its effects. In the city, as far as I know, judging both from my own experience & what I have heard from our oldest physicians, it is never known as an epidemic. Sporadic cases often occur, but the disease never becomes general. In some seasons dysentery, in certain districts of the country, is extremely fatal. I have heard that it once occurred in the neighbourhood of Chester county, where it proved as mortal in proportion to the number of inhabitants, as ever the yellow fever did in the city of Philadelphia. In these instances, the fatality, I think, may be attributed to some cause superadded to the mere affection of the bowels. I suspect that this may be traced to the same source which gives rise to such fatality as sometimes occurs in the bilious fevers of our country. It is not improbable that the two diseases often unite to produce those terrible epidemics which, in some situations, are as much to be dreaded as yellow fever in the city.

A patient attacked with dysentery feels an uneasiness in his bowels, with a disposition to go frequently to stool; & when there makes very considerable efforts, without an ability to procure much relief. Sometimes the disease commences with rigors; but this is by no means universal. If proper methods are not adopted the irritation of the mucous membrane increases, accompanied with violent pain & constantly repeated, but unavailing efforts to evacuate the bowels. If the stools be examined, the physician will soon perceive that the mucous membrane has been secreting a considerable quantity of a peculiar fluid which, in general, is tinged with blood. Occasionally the blood is in considerable quantities. Sometimes there will be found a kind of curdled mucus which is mixed with serous fluid, & bears a resemblance to what, in common language, is called "scraped guts." Nothing like a natural evacuation occurs. These symptoms go on increasing; & if proper treatment be not interposed, or, as is often the case, if improper articles are administered, the patient becomes worse & worse, & often ultimately dies. Sometimes dysentery terminates life in a very short period. I have known a fine vigorous man die in five days, of an attack of this disease. In many cases it assumes a very protracted form; & chronic dysentery is familiar to every practitioner. Persons going from this climate to the tropics are very apt to be attacked with dysentery, the acute

symptoms of which pass off, & the disease becomes chronic & continues for a long time.

Dysentery may be considered as a febrile condition of the system, blended with an inflammatory affection of the mucous membrane of the intestinal canal. There is a striking difference between cases of this complaint, & those in which the peritoneum is involved. In dysentery the patient will often bear pressure on the abdomen without being sensible of acute pain, as in peritonitis. I have often seen dysentery connected with a strong active pulse, indicating a high degree of inflammatory action; and of the two evils, if I must contend with a severe case of dysentery, I had much rather meet with one where this high degree of inflammatory excitement should exist, than one attended with a languid circulation & malignant symptoms. The practitioner is often able to form some idea as to the severity of the disease, from the facility with which he can procure fecal evacuations by cathartic medicines. Perhaps there is no disease in which there is greater liability to dangerous error than in dysentery; & among the common people, this error very generally obtains. A patient rises frequently, perhaps five or six times in an hour, & it is found that at each time, there is some little discharge. Under these circumstances, it is not uncommon for himself & his friends to imagine that he is purged almost to death. Most unhappily for the poor patient, a system of stim-

ulating & astringent treatment is at once adopted. Instead of carrying off the disease by purgatives, the attendants are very apt to give burnt brandy, spiced wine, & a variety of astringent articles, to stop what they conceive to be a lax. From the nature of the case, it may easily be understood, that articles of this kind must invariable prove pernicious; & in many cases, may pave the way to death. Hence, when called to a patient, afflicted with a complaint in his bowels, you should be exceedingly careful; to ascertain, at the very threshold, the exact nature of the disease, whether it is dysentery or diarrhoea. In the latter complaint the patient is often disposed to go to stool, & some pain precedes each attempt to procure an evacuation; but copious discharges take place, & the patient is for the time, relieved. But in dysentery, let the patient go to stool a hundred times a day, if you please, no relief is experienced - no true fecalent evacuations are procured.

I will no proceed to consider the general principles on which the treatment of this disease is to be conducted. In those cases in which the pulse is decidedly strong & active, I regard the use of the lancet as essential. But in midway cases, where the condition of the system seems to forbid the use of the lancet, & at the same time the symptoms seem to indicate the necessity of abstracting blood, leeches or cups applied to

the abdomen are very beneficial. Instances, however, very frequently occur, where the pulse is small, frequent, irritable, & without strength; & here, as a general rule, the primary indication is to unlock the bowels, & procure natural evacuations. If, however, the stomach is irritable, & this irritability depends on bilious accumulations, or other offensive matters in the stomach, an emetic may be resorted to with great advantage. But the cathartic plan is that principally to be relied on. In the commencement of dysentery the mercurial cathartics will often be found to answer an excellent purpose. But they should generally be followed up with those of a milder character. After a dose of calomel alone, or of calomel & jalap, castor oil is a cathartic which comes in very appropriately. This last article, in the early stages of the disease, cannot possibly do any harm. As much as the stomach will bear may be given with safety; for whatever there may be more than sufficient to produce the desired effect, is discharged by the bowels, lubricating the surface over which it passes. But you will not unfrequently find patients whose stomachs will not bear the castor oil; & in those cases it becomes necessary to resort to other remedies. The neutral salts, particularly the Epsom salts, may, under these circumstances, be very properly employed — Salts are more grateful to the stomach when dissolved in Seltzer water.

In some cases advantage will result from combining them with small doses of ipecacuanha or tartar emetic. In addition I direct large mucilaginous injections to allay the pain & irritability of the bowels. Flaxseed tea with, or without, oil will answer the purpose very well. When the pain & irritation are very great, anodyne injections, made by adding a tea spoonful of laudanum to a small quantity of starch, are an excellent remedy. Demulcent drinks, as flaxseed tea, barley water, &c., are excellent auxiliaries, & should not be neglected. A mixture of mint & mallows used to be a great favourite with Dr. Wistar. A solution of gum arabic copiously drank is very beneficial. Your object remember is to march forward till you have obtained natural evacuations; & for this purpose, immence quantities of medicine are sometimes necessary. But you may inquire, – is this practice to be pursued night & day, & is the patient to have no rest? My course is to pursue the cathartic plan till I have procured fecalent discharges, which I generally accomplish in 24 hours, & then to afford the patient some rest at night by means of an opiate. But this should not be given alone: two other indications are to be answered at the same time – one to produce determination to the surface; & the other, while irritability is allayed by the opiate, to introduce something which shall tend to relieve the

structure of the bowels, & assist in the cathartic operation. With a view of these indications, I direct the opium to be combined with ipecac & calomel. I have often allowed my patients to lie by for hours on this medicine. No time is lost. A determination to the skin, which is a point of great importance, is produced by the ipecac, & the calomel serves to cooperate in evacuating the bowels. One grain of opium, one & a half of ipecac, & ten of calomel, may be given at bed time. This produces rest & prepares the system for the administration, in the morning, of castor oil, epsom salts, or some other cathartic which may agree better with the stomach. This practice is adapted to the early stages of the disease: but after its continuance for some time, I often use opium & ipecac <u>without</u> calomel.

But cases occur in which other remedies than those which have been mentioned are required. You may have been using castor oil & epsom salts for a long time, & still wishing to keep up the action of the intestines, may look for something which, while it operates gently on the bowels, serves also for nutriment. For this purpose I can speak favourably of the oil of butter. I direct some of the best sweet butter to be procured, & to be washed several times in cold water till all the salt is removed: boiling water is then to be poured over it: this liquifies it & it rises to the surface in the form of an oil.

I use this in the dose of a table spoonful, & from this up to a wine glassful, every hour or two hours. It may also be advantageously employed in the form of an enema. I have often found it to allay irritation, & to operate very happily as a laxative. Hence, as a medium practice, when you wish to suspend for a short time the active cathartics, & at the same time, keep up some slight action in the bowels, the oil of butter is a very appropriate remedy.

In some cases of dysentery, I have seen a combination of tonics & cathartics very useful. I once attended a patient severely affected with this disease, in whose case calomel, castor oil, &c., had been employed, & yet the complaint continued. I then directed an infusion of bark & rhubarb in the dose of a wine glassful every hour, This was given in the forenoon & castor oil was administered in the evening; & a very happy effect resulted. In another instance, ℥ss of good bark with ℥ij of rhubarb were infused in one pint of water, & a wine glassful was given every 2 hours. On the same principle we sometimes find the other tonics, as columbo, &c., very useful. I have known Dr Griffitts to prescribe a combination of columbo & rhubarb in powder.

We are sometimes compelled in dysentery to resort to some mild cathartic combined with an opiate. Hence the oleaginous mixture is, in some instances, very advantageous.

In the progress of the disease, our views are not confined simply to the evacuation of the bowels, but we also attempt to make some impression on the system. In some cases

the dysenteric patient, in the progress of the complaint, sinks very low, & requires something to support his strength. This is sometimes the primary indication. To fulfil it various remedies of a stimulating & nutritive nature, as wine whey, &c., may be employed. The Spirit of turpentine has been employed in some forms of dysentery; but I believe not very successfully. But there is a remedy from which Dr. Emlen informs me he has derived great benefit: I allude to the warm bath. It should be used two or three times a day. It relaxes the skin, determines to the surface, renders the system susceptible to the operation of medicines, & makes a favourable impression on the disease.

Great benefit is often derived from blistering, & there is no part to which this remedy can be better applied than to the abdomen. Sometimes blisters to the wrists are useful. In bad cases I can highly recommend the employment of blisters. In young children who are exceedingly restless, & who can not be made sensible of the utility of the remedy, it may be deferred longer.

Occasionally instances occur attended with so great debility as to render evacuating remedies improper, till the system has, in some measure, recovered its energy. A case of this kind occurred to Dr. Hawthorne & myself. We relieved pain by opium, and supporting measures, & had to lay pretty much upon our oars till the system rose, before we could resort to evacuants: but by assiduous attention the patient recovered.

A respectable practitioner in Burlington, Dr. Cole, informs me that when he wishes to procure a copious evacuation from the bowels the next day, he generally gives a large dose of opium at night. He thinks that opium renders the intestines susceptible to the operation of cathartic medicine.

I have seen dysentery combined with intermittent fever; & in these cases I have found bark very useful. There was a respectable practitioner in the neighbourhood of Darby, Dr. Gardner, (now dead) who made great use of bark in one season when the dysentery was prevalent in that place. He was so successful as to be induced to believe, that the disease would yield to this remedy on all occasions — here he was too sanguine.

I have occasionally seen dysentery terminate in diarrhoea, & the strength of the patient to fail rapidly. During the summer of 1821, I had a case of this kind. a few days before death the stools changed, became bilious & natural; but the patient sunk rapidly, & though considerable efforts were made to support him; yet they proved abortive & he died.

You will often find dysentery a very obstinate disease. Sometimes you will be flattered by procuring natural evacuations; & yet, when the medicines are withdrawn, the same disordered stools return. You should impress it on your patients that this will be likely to happen, & that they must not be discouraged by the change.

Sometimes a troublesome excoriation takes place about the anus. The proper are an ointment made of opium & lard, anodyne fomentations, &c., I was once sent for to Norristown to see a patient who had been affected with dysentery. He appeared to be cured of this disease, but in consequence of excoriation about the anus, these parts were kept in a state of constant irritation. The remedies above mentioned were resorted to & he recovered.

For diet in the acute stage of dysentery, I would confine my patients to mucilaginous articles of the most simple & mildest character. Flaxseed tea barley water, rice water, &c., are often resorted to. As the disease advances the food may become more nutritious than was at first allowable. When the bowels are weak, the various preparations of rice, which you know is slightly astringent, may be advantageously employed. All fermentent articles should be avoided. Tissault (I believe it is,) recommends the use of ripe fruits throughout the disease; but my own experience does not allow me to agree with him. In the early stages even ripe fruits disorder the stomach, induce flatulence, & occasion irritability & distress of the bowels. In some stages of the complaint, perhaps, they may be safely employed. I have known Dr. to recommend black berries in certain cases.

After the disease has assumed the chronic form

It is of the utmost importance to wear flannel next the skin. To keep up heat & action in the surface is absolutely necessary.

After the dysenteric symptoms have disappeared, & the patient is left in a state of debility, the vegetable tonics may be interposed with great advantage. Columbo, quassia, cascarilla, &c., are often very useful. In convalescence the stools are very apt to be frequent & sometimes dysenteric. I have known the spirit syrup of rhubarb, with a few drops of laudanum, given occasionally, to be very useful.

Another point to which your attention should be particularly directed is the mode of preventing dysentery. In some country neighbourhoods, I believe the disease is much more prevalent than it otherwise would be, in consequence of the indulgence in the use of improper articles of food, & of exposure to such causes as must inevitably weaken the tone of the bowels. I do not propose to enter at present into the consideration of this subject. I spoke of it at large in my lectures on vegetable physiology; & I have published some papers relative to it in the Village Record, printed at West Chester, under the title of "Essays on Health." In these I have endeavoured to point out the causes leading to the complaint, & the proper methods of prevention; & to them, therefore, I refer you for further information.

Before closing the consideration of dysentery in its

acute form, I will just observe, that in a conversation with Dr. Physick, he told me he had found no disease which was of more difficult management, & which cause him more trouble than dysentery: & that the remedy which he had found most effectual was a liberal bleeding in the commencement without reference to the pulse. This I tell you, because the authority of so experienced a physician as Dr. Physick is of great weight. I have already mentioned that in my own practice, I am not in the habit of employing the lancet, unless called for by an active & strong pulse. - I have been informed by an intelligent country physician that some of their cases of dysentery are so malignant & prostrate the patient so speedily as to forbid the lancet.

On the whole, I must confess, that my experience in dysentery has not been very extensive: I do not, therefore, speak with that degree of assurance, in the treatment of this complaint, that I sometimes do when treating of diseases with which I am better acquainted.

Chronic Dysentery and Diarrhœa.

Dysentery sometimes assumes a chronic form, & then becomes exceedingly troublesome to those afflicted with it. This is the case also with diarrhœa. Of recent

diarrhoea I do not propose to speak; but shall confine myself to the chronic form of the complaint. In these diseases, the bowels seem to acquire a habit, & the system accommodates itself to this habit; & the patient continues to suffer for weeks or even months before he is worn down.

I was consulted in 1820, in a case of chronic dysentery, occurring in one of the inferior officers of the Congress frigate. The disease had continued 8 months, when he came under my care in consultation with Dr. Atlee. Various modes had been tried for relief. When I discovered the nature of the case, & found the want of action on the surface of the body, one of the first indications in the treatment which presented itself to me, was to restore heat & action to this part. I believed that without attending to this point, all our efforts to correct the disorder of the bowels would be unavailing. With this view then I advised the warm salt bath to be taken daily. Convinced that in some of these cases which have been of long standing, the hepatic system is brought into sympathy, & that a revolution in this system may be productive of good effects, I proposed to Dr. Atlee to put the patient on the use of calomel in small doses, say $\frac{1}{6}$ of a grain every 2 hours; & on the following day, to give some mild cathartic, possessing tonic properties, an infusion of rhubarb, for example. This was to be pursued till the discharges should become natural in their appearance.

The use then of calomel in minute doses, succeeded on the next day by the infusion of rhubarb, a table spoonful every 2 hours, & combined with daily emersion in the warm salt bath, effected a cure, & the patient is now completely well. – I should add that flannel clothing next the skin was an essential part of the treatment. The practice recommended by Drs Dewy and Chapman of applying a flannel roller round the abdomen is worthy of great attention.

A proper regulation of the diet is of the utmost consequence in these complaints. The least irregularity in this respect may prevent the good effects of all our remedies, & completely undo all that has been effected. The patient should scrupulously abstain from all kind of fresh fruits & vegetables. This as a general rule is certainly a good one; but cases sometimes occur where vegetables prove very beneficial: I was consulted by a lady from the western country, whose bowels had been in a disordered condition for some time, & she had been very regular in her diet; at length a decided predilection for fruits & vegetables took possession of her mind – she employed them & recovered. But in most cases these articles are improper; & even if the disease has been cured, they are very apt to occasion a relapse.

Chronic diarrhoea is a more frequent complaint than chronic dysentery. The patient is often affected with frequent & profuse discharges; all the aliment

is rapidly carried off; & unless relief is procured, the patient is at last completely worn out. Great emaciation with a total loss of action in the surface takes place, and death is the result.- I know no better way of illustrating this disease as it usually appears, than by reading to you a case attended by Dr. Wood & myself, the account of which he has furnished me with.

"Case of J. C.- J. C., between 25 & 30 years of age, had been frequently subject to attacks of hepatic colic, in the last of which a cure was effected by the use of mercury so as to excite a very slight salivation. This occurred in the Spring of 1818. From that period he enjoyed better health than for a long time before. In the latter part of the fall, or in the commencement of the winter, of 1819, he undertook a journey to the westward on horseback. His manner of living was extremely irregular. Sometimes he made only two meals in the day; sometimes, when he made the usual number, it was at irregular intervals, & under various circumstances of rest & fatigue. This method of living, united with exposure to all kinds of weather, & with fatigue far beyond any to which he had been accustomed, acting on a system which had frequently been the subject of disease, produced a complaint of a nature extremely severe, protracted & dangerous. At various stages of his progress he was so severely handled, that he was forced to apply for medical aid, from which he only derived temporary relief. When, on his return,

he first applied to me, he had been labouring under the complaint for 3 or 4 months. At this time, which was about the latter end of February 1820, he complained of a constant & extremely distressing pain just above the pubis. His bowels were irregular, sometimes more loose, sometimes more constipated, than usual. His urine was entirely limpid & in excessive quantity, so much so as almost to constitute diabetes. I gave him some directions, & did not see him again for several days. At the end of a week he sent for me to his lodgings. In the mean time, by the recommendation of a gentleman with whom he boarded, he had taken several very powerful purges. His bowels were now in a very disordered state. His stools in the 24 hours exceeded 30 in number, & during the night he was constantly jumping in & out of bed. The colour of the evacuations was very dark, & in consistence they resembled tar. Sometimes they looked as if mixed with dissolved blood, and, in the subsequent course of the complaint, they were generally of this nature. The pain which he suffered was almost intolerable. The seat of it was in the small of his back, in his bowels, &, sympathetically, in his knees. So violent was the pain in the last situation, that he frequently observed, he would willingly suffer amputation, if it would bring him relief. He no longer complained of the pain over the pubis which had before troubled him so much. The suffering was always more

acute for several minutes before a stool. He was much troubled with flatulence. His appetite was never entirely destroyed, as, through the whole course of the complaint, he was able to make one, two, or three meals in the day. His tongue was generally covered with fur. His urine was still secreted in immense quantities, & of a limpid colour. This symptom, however, soon gave way to the plan of diet which was adopted. As may be supposed from so severe a local disease, his constitution suffered very considerably. His pulse was rarely slower than 100 in the minute, & at the same time was rather feeble. His nervous system was very much disordered, & he was now & then seized with spells very much resembling hysteria. His spirits were always much ~~op~~ pressed. I never saw a living being more emaciated. The flesh had almost all wasted away from his limbs; the bones projected at his hips & back as if they would make their way through the skin; & his abdomen was shrunk almost to nothing. It appeared surprising to me how so much matter could be secreted into the bowels, as passed in the course of the day.

Dr. Parrish saw him with me in consultation. He was put on such a diet as was calculated to be most easy of digestion; as eggs, oysters, mutton, beef, toasted or stale bread, with rye coffee or chocolate for breakfast & supper. All fresh vegetables were excluded without a single exception. To this diet he adhered rigidly throughout the disease.

With a view to correct the disordered action of the liver, which was conceived to be the principal cause of the disease, we directed the use of calomel in the dose of $\frac{1}{6}$ of a grain every half hour, till 3 grains should be taken in the day. As it had been ascertained that any thing astringent increased the pain & irritation, it was thought best not to venture on this plan till the alvine secretions should be corrected. An opiate at night, however, was ordered; but proving injurious, it was afterwards omitted. To remove the irritation of the bowels in some measure, the oil of butter was directed. For a little while this answered a good purpose; but after a few days it became disagreeable to the stomach, & was rejected. It was prescribed in doses of a table spoonful every 2 hours, every other day, the calomel pills being given on the alternate days. By pursuing this plan for some time, the discharges from the bowels again assumed a feculent appearance; but the diarrhoea continued, & the pain was very severe, though less so than before. A blister was now applied over the abdomen, which gave considerable relief, & enabled us to administer an opiate at night with evident advantage. After the blister healed, it was again applied & with a salutary effect. The calomel & oil of butter were omitted.

Continuing without much improvement, the warm bath impregnated with salt was directed to be taken every night at bed-time, & followed by 30 or 40 drops of laudanum. The effects of the bath were wonderful. When he first entered

it, he was so weak as to be totally unable to assist himself, & on the second time he fainted: but the disorder was much improved. The pain was diminished, & the night was passed without disturbance. The treatment hitherto pursued had prepared the system for the administration of astringents. According, a preparation of galls & brandy with an infusion of cascarilla was employed; & under this plan, with a continuance of the bath, he ultimately recovered. Once or twice afterwards he relapsed, but was restored to health by the same means. After the removal of the disease, his appetite became voracious, he increased rapidly in flesh, & has ever since remained in perfect health."

I have now proceeded far enough in the subject of chronic diarrhoea & dysentery to convince you of the very great importance of attending to the surface of the body, & the extremities. The warm salt bath, flannel next the skin, & flannel socks dusted with Cayenne pepper, are remedies of vast importance. I have also proceeded far enough to show, that when connected with derangement of the hepatic system, the disease should be treated with small doses of calomel, alternated with cathartic medicine, particularly such as possess the tonic & laxative power combined, as rhubarb for example.

But it is necessary to resort also to other remedies in the treatment of chronic diseases of the alimentary canal.

Among these the astringents hold a distinguished rank. It frequently happens that these may be interposed with very great advantage. A great variety of articles have been recommended. The spiced syrup of rhubarb, which, though not purely astringent, combines this power with the laxative, is a preparation much employed in this city in certain cases of diarrhoea. It is more aromatic & stimulant than the simple syrup, &, in small doses, combined with a few drops of laudanum, I have occasionally found it very useful. A dessert spoonful with 5 drops of laudanum, may be given 3 or 4 times in the 24 hours. But among the astringent preparations, few will be found more efficacious, than the syrup of galls made in the following manner: Take ℥ii of the best Aleppo galls, coarsely powdered, place them in a cup capable of containing 5 or 6 ounces of fluid, & fill the vessel with the best old French brandy. On the top of the cup forks or skewers are then to be placed, & on these, pieces of loaf sugar to be laid: the brandy is then to be set on fire, & allowed to burn as long as there is sufficient alcohol to supply the combustion. The sugar melts & drops into the cup; &, as it disappears, fresh quantities are to be added, till the brandy ceases to burn. At the close of the process you have a syrup of galls, which is to be strained off from the coarse powder. This is a powerful astringent, & not unpleasant to the taste. When you wish to make it aromatic, you may add a little cinnamon or cloves to the galls. One single tea spoonful of this syrup

is sufficient for a dose. I have used it from this quantity up to a dessert spoonful, sometimes by itself, sometimes combined with the testaceous mixture.

Kino is an astringent much resorted to in these cases of chronic disease. It is generally employed in the shape of tincture, & is most commonly combined with other articles. Some remedies uniting tonic with aromatic properties, are employed with considerable advantage in chronic diarrhoea & dysentery. Cascarilla is particularly adapted to some of these cases. It is used in the form of decoction, in the dose of a wine glassful 6 or 7 times a day. In addition, the other tonics, may be occasionally employed, as colombo. quassia, &c.

Before the case of J. C. I had under my care a young lawyer of some eminence from the state of Maryland. In that instance the same practice was pursued as in the case already detailed, with the exception of the calomel. The warm salt baths, the syrup of galls, with an attention to diet were all resorted to, & with success. I never had a more satisfactory case, either in the happy termination, or in the lively expression of gratitude on the part of the patient. He has several times, when in Philadelphia, called on me to express his thanks for the services I rendered him.

In the treatment of diarrhoea you frequently hear of the testaceous mixture. This preparation has often a very salutary effect, given in combination with a

little laudanum & some astringent article. I was consulted by an old lady who laboured under chronic diarrhoea for several years. It was not of that debilitating kind we often meet with; but it subjected the patient to a great deal of inconvenience. I regulated her diet, & at once put her on the use of the testaceous mixture with astringent articles. The effect was wonderful. The diarrhoea was speedily checked. Finding so sudden an effect produced, I began to be fearful, lest the cessation of a discharge to which the system had been subjected so many years, might be followed by dangerous consequences; especially as the patient was at a time of life when the catamenia are about to disappear. I warned her if she should be sensible of disease in her head, that she should immediately stop with the medicine, & invite back her old complaint. The preparation I employed was the following:

Take Prepared oyster shells,	-	℥vj
Gum Arabic,		
Loaf Sugar,	ā ā	℥ij
Tinct. of Kino,		ʃ℥ij
Tinct. of Cinnamon,		℥j
Laudanum,	drops,	Lx
Pure water,		℥v

The ingredients were well rubbed together, & a 8oz mixture was thus formed of which a table spoonful was used for a dose. The patient soon became acquainted with the

proper method of regulating the articles; & the completely succeeded in arresting the disease which had caused her so much trouble. I might here mention that in forming the testaceous mixture, my friend Dr. Griffitts, does not use gum arabic & sugar - he employs simple water & generally adds the comp. Sp. of lavender. - The decoction of logwood & the decoction of galls are also occasionally employed. I have used the pomegranate in decoction, but am not very partial to it.

It now remains for me to state, that after having attended to the restoration of heat & action to the surface; after having corrected the functional derangement of the liver; after having employed astringents to check profuse evacuations, & anodyne injections with opiates at night to relieve irritation, we shall often completely fail in effecting a cure, unless we attend also to the diet. There is no disease in which correct rules as to the dietetic management of the patient are more essential, than in chronic diarrhoea. The patient may be going on very well, & you may be flattering yourselves with the prospect of a speedy cure, when all your efforts may be thwarted at once by a slight irregularity in diet. The patient should be restrained from every species of fresh fruit & vegetables; & even the potatoe should be prohibited. The farinaceous articles, among which rice may be consid-

and as the best are very well suited to the disease. Rice certainly possesses some astringent properties. It may be used simply boiled, or in the shape of rice & milk. There is a pudding prepared from this article, which I have often recommended to my patients. The rice is to be first well boiled, so as to render it soft & easy of digestion. It is then to be mixed with milk & sugar, & baked in an oven exactly as the common rice pudding. The French practitioners prepare what they call the cream of rice, which occasionally answers very well. A lady of my acquaintance has improved on the French method. She puts rice into a considerable quantity of water, & boils it several hours very gradually till it is rendered exceedingly soft; she then rubs it over a sieve, so that the liquid & softest portions pass through. This is seasoned with rose water & a little nutmeg grated over it. Eaten with milk or cream it forms a very pleasant article of diet. Besides rice other farinaceous articles may be used, such as arrow root, sago, &c. Tapioca gum arabic, & other articles of the same kind are also proper. Crackers are very suitable; they are preferable to common bread. There are some cases which are much benefitted by the use of milk. I recollect one of the most obstinate cases of diarrhoea which resisted the skill of the most eminent physicians, (Dr. Wistar among the number,) recovered under the daily use of new milk with plenty of nutmeg grated over it. But I have generally been in the practice of directing certain articles to be added to the milk.

Among these roasted flour holds a high rank. It should be roasted like coffee in a pan till it becomes brown: milk with this has, sometimes, a very happy effect. There is another preparation which is familiar to mothers & nurses, and with which physicians ought to be acquainted. Some flour is tied in a rag & boiled for several hours till it becomes as hard as chalk. It is then grated & used for thickening milk, & for making pap. - In all the different shapes in which milk is prepared, I am fond of adding some aromatic. Solid food will sometimes answer very well in diarrhoea; & boiled mutton or boiled fowl is, perhaps, the best. In some instances astringent drinks, as, for instance, good old Port wine, used in moderation, are beneficial.

But in chronic diarrhoea, as well as in dyspepsia, you will occasionally find that articles you would hardly have thought likely to produce a beneficial effect, will bring about a cure. Dr. Wistar related to me an anecdote which illustrates this position. He was himself affected with tenderness of the bowels; & a trifling matter would bring on diarrhoea which, when it did attack him, rapidly reduced his strength. He told me that on one occasion, when he was afflicted in this way, it happened that he had some bottled malt liquor in his house, which had remained there a considerable time, & had become somewhat sour. From some cause or other he took a little of this hard ale, & found to his surprise, that it proved useful & that he recovered under its use. Sometime after this he had a patient similar-

ly situated, & in his case he tried the same remedy. He sent him some of his ale, & the patient recovered under the use of it. Another time the same man was again attacked, & being unable to procure from the bottling cellars any of the liquor he wanted, he sent word to Dr. Wistar that he would be much pleased to make an exchange with him, promising for every bottle of his hard ale, to send him another of the best.

Dr. Physick related to me an anecdote of a case of diarrhoea which was cured by the use of sound cider through the day, & at night a dose of aromatic tincture of rhubarb with cardamon seeds, as prepared by some of the apothecaries, & particularly by John Hart of this city.

On the whole, before closing the subject of diarrhoea and dysentery, I wish to recal to your remembrance a few general observations. In the first place, always attend to the surface & endeavour to restore heat & action to it, & also to the extremities. 2nd. Endeavour to correct the functional derangements of the hepatic system, where there is reason to believe that such derangements exist; & if there is organic disease remove it if possible with the utmost diligence. 3rd. At this point resort to astringent remedies, varying them according to the circumstances of the case. 4th. If there is considerable irritation, allay it by anodyne injections & opiates, particularly at night; & 5th. Attend most scrupulously to the diet of the patient; for, unless this is done all your care & attention will often be unavailing. At the same time you should remember, that, as in dyspep-

sia, exceptions to general rules with regard to diet occasionally occur, & should not be disregarded. In all cases you should watch the pointings of the system, & gradually allow the patient to revert to his former diet.

Rheumatism affecting the Intestines.

I shall commence the present lecture with some observations on an acute disease which I shall call rheumatism affecting the intestines. The same observations will generally apply to gout affecting the same part.

The disease of which I am about to speak is observed in persons subject to gout & rheumatism. If I am called to a patient who has been subject to these diseases affecting muscular parts, & find that he has been suddenly attacked with severe pain in the bowels resembling colic; that this pain is rather paroxysmal than otherwise, & especially if I ascertain that the pain had been suddenly removed by friction or other means from the extremities, I entertain little doubt that translated gout or rheumatism is the cause of the symptoms.

In the course of my practice I have met with a few cases, such as I am about to describe. I have in some instances known the pulse to be laboured & tense, indicating an active state of the circulation. In these cases the practice must be materially different from what would

be proper in such as are attended with a debilitated state of the circulation. I consider it of the utmost importance to fix in the mind some general indications on which our practice is to be founded. Thus, in a patient affected with violent pain, & that pain paroxysmal in its character, & attended with an excited state of the circulation, one of the first indications would be to ~~reduce~~ reduce this excitement by the abstraction of blood. In addition to this, it is important by proper measures to evacuate the alimentary canal. For whether the disease arises from inflammation or simple spasm, it is certainly necessary to remove any mass of feculent matter that might remain & produce irritation.

But suppose the pain to be extreme; suppose the suffering to be so great, that the patient is unable to wait for the regular operation of cathartics, & it becomes necessary to adopt some immediate measures of relief; you will then see the necessity of combining with the cathartic some remedy calculated to allay pain & resolve spasm – opium will answer this indication; & a combination of calomel & opium answers very well in some of these cases. Besides this, we should have in view other articles which may have the effect of resolving spasm, & which may be called in as auxiliaries to opium; or, if the symptoms are not very urgent, to supply its place. Several of the antispasmodics will answer this purpose. One of the best & most easily obtained

is assafœtida; & I have known it to produce the happiest effects in the form of enema. We have also the musk: but this article is very expensive, & economy, in many instances, would prevent a resort to it, unless in case of necessity. The rectified oil of amber & ether come in very well. But the assafœtida, from much experience, I consider a very important antispasmodic, & entitled to much attention.

But the indications do not end here. Not only have we to reduce vascular action & remove spasm; but we must also resort to counter irritation, especially when there is reason to believe that the disease is the result of metastasis. Hence, you can easily understand the importance of sinapisms. If the pain in the bowels arises from the recession of gout or rheumatism from the extremities, nothing can be more natural, than to endeavour to bring it back again; & for this purpose, mustard plasters applied to the feet & ankles are very important remedies. Dr. Barton, the late professor of the practice, who was himself very subject to attacks of gout, was very much opposed to the use of sinapisms & stimulating applications of any kind to the extremities when the pain was seated in these parts. He feared, & justly too, that they might repel the disease to parts of greater vital importance. But in cases where metastasis had taken place, he thought the remedy excellent. Dr. Barton, perhaps, had as much experience in gout as any

other physician – he had 7 or 8 brothers all of whom were subject to the disease. The Dr. informed me that one of his brothers had an attack of gout in his feet; & the pain was so severe, that he wished to have mustard plasters applied: he had on several occasions experienced great relief from them, when the disease had receded from the extremities; & he was in hopes that the same beneficial effect would result from their application when the pain was seated in these parts: but the Dr. objected to their use for the reason already given. His brother, however, persisted in his entreaties, & the Doctor's remonstrances were vain. The sinapisms were applied, & that night he was seized with violent pain in his chest.

If you find coldness of the surface, as will sometimes be the case, it will be desirable to restore warmth, & for this purpose, fomentations & the warm bath may be resorted to with advantage. If the pain should continue obstinate & severe, notwithstanding the use of the remedies mentioned, counter irritation by means of blisters in the neighbourhood of the part affected, may be advantageously interposed. I will now relate one or two cases to illustrate the practical principles I have advanced.

Case of J. G. – In the spring of the year 1810, I attended an elderly gentleman in this city, who had an attack of the gout. He was seized with violent pain

in the left side of the abdomen accompanied with frequent evacuations. The pain was situated about the sigmoid flexure of the colon, & occasionally darted into the back. Whenever the pain was considerable, his pulse was remarkably strong & active. The pain was not constant, but occurred in paroxysms. It was necessary to bleed him, & he bore the loss of blood well. The operation was repeated several times, & a strong proof of its being required was, that it always afforded relief. It was also necessary to evacuate the alimentary canal. For this purpose castor oil was given in large doses, & purgative injections were administered, till the bowels were completely emptied. After this injections of assafoetida were directed, which relieved him greatly. Sinapisms were also applied. Dr. Physick saw him with me three times. He advised the use of anodyne enemata, which had a very happy effect, & proposed 10 drops of the rectified oil of ambrei every 4 hours. By pursuing this plan the patient happily recovered.

About two years afterward, I attended this patient with the same disease; but in this instance, it took hold of the stomach. The same course of treatment was not exactly indicated in the present, as in the former, attack. Sinapisms were applied to the feet, opiates & strong ginger tea were given; &, at the same time, the bowels were kept freely open by castor oil & injections. In the course of the attack, several chills occurred for which volatile alkali was given with advantage; & before the close of the case,

on account of the debility which supervened, mustard whey & other stimulants were employed. Tonics completed the cure. – In the first instance, as you have perceived, the intestines were attacked & depletion was required; in the second, the stomach was the seat of the disease, & stimulants & tonics were demanded.

Calomel combined with opium has been very much employed of late as a purgative in diseases of this description; though oil with laudanum will, perhaps, in many instances, answer equally as well.

Case of J. C. – In the year 1810, I was consulted in the case of J. C. who had a violent pain in the cavity of the abdomen, attended with constipation of the bowels, & an active state of the pulse. When I saw him, Dr. Park had been prescribing, & had followed the usual course. The warm bath & bleeding had been used, & attempts had been made to evacuate the bowels. But he was still in very great pain; and perceiving that the pulse was full, strong, & very active, I proposed to the Dr. that we should resort to the lancet once more. An injection of tobacco had been tried, but not having succeeded, I advised the use of it the second time – This was before I was so well acquainted, as at present, with the dangerous consequences which sometimes result from the use of tobacco enemata: & if a similar case were now to occur, I very much doubt whether I should resort to the remedy. In this instance, however, it was given, &, united with the bleeding, entirely relieved the pain. The patient

said he felt as if a stricture in his bowels was giving way.

At this time, moreover, his system was very irritable, in consequence of which I proposed to the Dr. to give him a julap compound of ether & musk. This was done, & in addition, large injections of assafoetida were given. A strong infusion of senna was used, also a decoction of columbo. These remedies afforded him very great relief.

This patient was subject to occasional attacks of rheumatism in muscular parts. Hence, from the nature of the case, there could be no doubt that the present affection was rheumatism of the intestines.

I have stated that in some cases we may resort to the lancet with freedom; & I have related a case illustrative of this position. But it proper for me to state that cases may arise where a resort to the lancet would be injudicious. We find a great diversity in patients subject to gout. In some there is a disposition to reaction after the stroke has been given; in others, on the contrary, there is a disposition to sink & become prostrate. Now if a patient with gout or rheumatism is suddenly attacked with pain in the bowels, & this pain is accompanied with prostration; if the pulse is feeble & the skin cool, surely it would not be proper to resort to the lancet, let the suffering be over so great. Sufficient time cannot have been afforded for inflammation to take place, & the pain is solely the result of spasm. If you take up the idea that the prostration results from excessive excitement, & have recourse to V.S. to relieve it,

you may rest assured that you labour under a great mistake. The practice of confounding pain & inflammation necessarily leads into great error. I wish to impress you with the importance of distinguishing between these two conditions. When the pain is great, & an excited state of the circulation exists, it is proper to bleed before resorting to antispasmodics: but when the system has been laid low by the stroke of disease, you should not proceed on the supposition, that it is an inflammatory affection. When treating of cholera, I had occasion to call your attention to the same thing. Violent pain attends some cases of this disease, dependent purely on spasm of the muscular fibre; & to treat this as an inflammatory affection, would certainly be to endanger the life of the patient.

Colica Pictonum.

I now pass on to consider some other spasmodic affections of the alimentary canal. These form an interesting class of diseases, which occasionally claim the attention of the medical practitioner. It may happen that in cases of this kind, the pain & distress will be located in the abdomen: but it may also happen that a severe spasmodic affection of the bowels will not display itself within the belly, but will mislead the practitioner by calling off his attention to some remote part, as the brain for instance.

I shall have occasion to illustrate this fact by cases. At present I shall consider the disease which has been denominated colica pictonum or painter's colic.

This affection generally depends on the poison of lead, & we meet with it very frequently among those who work in this article. This disease is painful; but so far as my experience has gone, is not very dangerous: at any rate it will generally yield to appropriate treatment, if applied early. The patient is affected with severe pain, & a twisting sensation in the bowels. We often meet with a slow bounding pulse, such as sometimes occurs in translated gout or rheumatism: but there is not the same condition as in enteritis. There is not the same degree of excitement & fever as occurs in this disease. It differs also from enteritis in the much greater length of its duration. Invariably, so far as my observation has gone, it is attended with obstinate constipation of the bowels. This state of things goes on, & unless efficient treatment be interposed, the patient will suffer a great deal of pain, & may in the end be worn out by the disease.

It has not fallen to my lot to witness a great many cases of colica pictonum, though I have seen a number. Certain districts of country in Europe are subject to it. In the neighbourhood of lead mines it was very prevalent, & continued to be so until a prophylactic plan was instituted, which, it is said, has materially lessened the number of cases. This consists in the daily use of sweet

oil. In plans which have been subject to the disease, it is common to take a wine glassful of sweet oil every morning; & the consequences of the practice have been very beneficial.

A gentleman of this city, E. H., a friend of mine, & a plumber by profession, was repeatedly attacked with colica pictonum. He told me that always after soldering he would be affected severely by the poisonous fumes of the lead; & generally several days would elapse before the muscles of his arms would be restored to their natural state. Often when engaged in this business, his hand would shake as much as if he had been in the habit of drinking; though he was a remarkably temperate man. I find the following notice of his case in one of my ledgers:

Case of E. H. — 10mo. 1810. I am really afraid this worthy man will never relinquish this business he is engaged in, until he falls a victim to the baneful influence of lead on his system. This is the third attack of the painter's or plumber's colic, which has brought his life into great jeopardy. He possesses a strong hereditary predisposition to gout, & the present attack seemed a combination of the two diseases. He had frequent eructations, & occasionally severe pain in his knees. The disease commenced with pain & a sense of twisting or spasm in his bowels. His pulse was slow & tense. When first called, I bled him freely, ordered cathartic pills, fomentations to the abdomen, &c.

but without effect. Anodyne injections relieved him greatly, but did not reach the cause of the disease. I tried him also with several large doses of musk without benefit. At my request Dr. Parke was called in, who has always attended him with me before; & we readily agreed to enter on the use of mercury, the only remedy that has ever yet radically removed the complaint. We gave him ʒj of calomel in the course of the night, & about gr x next day. This answered the purpose, & produced ptyalism which has, in his case, always succeeded. But it is worthy of remark that the relief is obtained several days before the discharges from the bowels are copious. It seems as if the spasm or stricture, is removed by the action of the mercury, & then several days are required before the tone of the intestines is so far restored as to allow them to expel their contents. After we ceased to give the calomel, I thought, during one day, small doses of the volatile alkali relieved him considerably of his languor. The columbo & chamomile in decoction were exhibited advantageously with a view to the restoration of tone to the intestines.

Mercury affects his mouth instead of his gums. In one of his formed attacks, the action of mercury on his tongue was such, that for two weeks he was unable to speak; & at that time he said he would never again take the article. I knew him to be of a firm & determined temper; & when I was again called, was not surprised to

find him obstinate in his unwillingness to take mercury. I told him I believed he would have to come to it at last; but I first attempted to relieve him by other means, as I have already detailed. At length, however, worn out by the pain he suffered, he submitted to the use of mercury. In every subsequent attack the same article has been resorted to, & a cure has always been effected.

In other instances, I have often met with colica pictonum. Then the same remedy was necessary. A short time, however, may be devoted with safety, if circumstances render it desirable, to the employment of other measures; for the disease, so far as I know, is not speedily fatal. There are seldom any inflammatory symptoms. One case, if I recollect right, I relieved by the liberal use of Jalap & cream of tartar. The patient was accustomed to grind paints in a cellar, & generally had a pitcher of water standing by him, of which he occasionally drank. The dust from the paint formed a pellicle on the water, & this was swallowed with the act. The consequence was, that he was seized with a violent fit of colica pictonum. In this case I believe I succeeded in effecting a cure without resorting to mercury. But the general result of my experience has been, that mercury is the only remedy on which reliance is to be placed, & that this should be carried so far as to produce ptyalism. The spasm is thus relaxed, & the

pain, of course, diminished; & after a few days have elapsed, the intestines evacuate large quantities of fæculent matter. Minor remedies, as the warm baths, blisters, injections, &c., may be employed; but you will recollect that mercury is that on which your reliance should be placed. - It was first recommended by an English physician who resided in a district where the disease was prevalent.

Combinations of calomel & opium, particularly at night, with the occasional use of anodyne injections through the day, I consider very appropriate in the treatment of this complaint. Two or 2½ grains of opium & 10 grains of calomel will be sufficient to be given at night, & with this the patient may be allowed to rest till morning.

Spasm of the Intestinal Canal in Children.

I now pass on to the consideration of spasm of the intestines, as I have observed it in infants. This is a disease with which you will occasionally have to contend. Several grades of spasm may be observed in the infantile state. The severe wind colic of children is a spasmodic affection of the alimentary canal. But I wish now to direct your attention to an affection much more serious, which sometimes proves fatal, but may generally be made to yield.

Occasionally in the course of my practice, I have met with children suddenly attacked with epileptic fits, differing essentially from common epilepsy. Instead of the stupor which generally succeeds an attack of genuine epilepsy, the child often recovers his reason immediately after the fit, & looks as if nothing had happened. This occurs several times a day. If you examine closely, you will find the child labouring under a sense of uneasiness in the cavity of the abdomen. So far as I have seen, the disease generally goes off; but sometimes it proves fatal. When this occurs, the fit returns, time after time, & the little sufferer, worn out by the frequent attacks, at length expires.

I propose to give you some cases which have fallen under my observation; & in doing so, I shall be the more particular, as I consider the subject to be very important, & as the little sufferers are unable to describe their own feelings, it rests of course with the observation of the nurse, mother, or practitioner, to decide upon the nature of the case. It is possible, in some instances, when the fits return very frequently, that the brain which at first only sympathized with the intestinal disease, may at length itself become affected: but I wish you to recollect that the primary affection is seated in the bowels.

Case of J. R. J.'s Child. — 1812, 7mo. The subject of the present note was an infant of only a few months old. From all the circumstances of the case, I was induced to attribute

her disease to a spasmodic affection of the bowels produced by flatus. The fits were very frequent. On her recovery from them, she appeared, immediately, to know those about her; & she was affected with nothing like the coma supervening epilepsy. I directed her bowels to be opened, had her once bled, used the warm bath, fennel seed tea, also the tincture of assafoetida, & she recovered.

I was afterwards called to attend another child of the same parents: but this one died. Thinking that the disease might result from the mother's milk, I advised, that if she should have another, it should never take the breast, but that a wet nurse should be procured from the beginning. My advice was attended to, and the next infant escaped without an attack of the complaint. – In cases where a wet nurse can not be procured, the diet of the mother should be regulated – she should avoid all flatulent food.

Case of Convulsions from Intestinal Irritation. – The subject of this note was a remarkably fine boy, aged about 9 months. He had several convulsions before I saw him. They came on suddenly, & were of short duration. One day his mother brought him to town in the carriage, called at my house, & told me he had a fit that day. I lanced his gums freely, directed his bowels to be opened, as they were constipated, his spine to be bathed with gin & brandy, & lac assafoetida to be given.

11mo. 2nd. 1818. – I was called out in the night in con-

sequence of Dickinson having had two violent convulsions in pretty quick succession. I found him with a cool skin, a blue appearance about the mouth, but evidently with a clear intellect. The child almost immediately on coming out of a fit, appeared to know those to whom he had been accustomed. As his pulse appeared somewhat tense, with a view to the solution of spasm, as well as to place the system in a condition that antispasmodics might act with more effect, I immediately bled him freely. He fainted under the operation, & had a discharge from his bowels. Soon after this he had another fit, which on his being put into the warm bath, subsided in two minutes. I gave him some lac assafatida, & in doing so, perceived that he discharged flatus from the stomach. I ascertained that the child suffered a great deal of pain, which was manifested by his stiffening himself and screaming very frequently. I now gave him an enema of assafatida with 9 drops of laudanum, & directed if he was not relieved, one drop of laudanum & a little lac assafatida to be given every 2 hours till he should become easy. I also directed a large spired plaster for the abdomen. Dr. Harlan staid with him through the night. I requested, if well enough, that he might be brought to town in the morning, in order to have him near me. He passed the night very comfortably; but towards daylight he had another convulsion, more violent than any of the preceding. He was again

put into the warm bath, & Dr. Harlan, very properly lanced his gums again, & gave him a mixture consisting of one drop of laudanum, 4 drops of spirits of hartshorn & a little magnesia, & applied a pair of blisters to his legs.

12th. He was brought to town, & the ride seemed to do him good. Being impressed with the belief that spasm of the bowels produced the convulsions, & that this was caused by acidity, I directed a tea spoonful of the infusion of hickory ashes & soot, to be given every 2 hours; the mixture of laudanum, spirit of hartshorn & magnesia to be repeated at the same interval, if in pain; the abdomen to be bathed with brandy, sweet oil & a little laudanum; & with a view to make a strong impression on his nervous system, without nauseating his stomach, I ordered his spine to be bathed with the rectified oil of amber & sweet oil. I visited him frequently, & was encouraged by finding his skin become warm & his face a little flushed – it looked like a determination to the surface, which I wished to see. He had not occasion to take his laudanum more than two or three times in the day, as he appeared easy without it.

13th. I was sent for early. He had one very slight convulsion about midnight; & as he was restless, his mother was afraid of another. I watched him & listened to his language, for infants have a language,

& happy the physician who understands it. I thought I understood from him, that the pain had left his bowels; but that he was very uncomfortable and thirsty. He was tired, & he felt disposed to make it known by fretting. His skin was warm & his face flushed. I gave him some cool water. He took it with avidity, & it made him more comfortable. I again lanced his gums, to do away irritation from that cause. I directed the medicines to be laid aside, & ordered a dose of oil to clear the bowels: but before this was given he sunk into a refreshing sleep in which he continued the principal part of the morning. About noon the oil was administered. He again became fretful, & the cold water was renewed. As the air seemed to revive him, I directed him to be carried out into the yard; & there the little lamb soon fell asleep. The afternoon & night were passed, on the whole, very comfortably, & the little patient escaped without a convulsion.

14th. He had no convulsion this day, though he was threatened several times. I gave him muskjulap, about one grain in a dose, or rather less. This was several times repeated with great success. His bowels were opened with an injection of fennel seed tea & oil, & the spired plaster was applied to the abdomen. This part was also bathed occasionally with sweet oil, brandy & laudanum, & drinks were giv-

en as before. I allowed his mother to give him the breast. Her mind was more composed, & I had placed her for several days on a strict animal diet, with ginger tea occasionally as a drink.

15th. The child was reported this morning to have had some fever in the night; but the musk was given several times. He was said to have fretted a good deal. I found him quite fretful from uneasy feelings, I believed; but hoped the disposition to convulsions had passed over. I directed a good dose of castor oil, & if he should be feverish or restless, to give a little sweet spirits of nitre, & to recur to the external applications if required. In the early part of the afternoon, on calling in, I found him quite uneasy. The oil had operated freely, & he had taken some musk without being relieved so much as I hoped he would be. I therefore directed one drop of laudanum to be given. Late in the evening, I called again, & was much alarmed at his situation. — It is here necessary to state, that two of the other children, viz. Elizabeth & Gustavus were now down with catarrhal fever. I had on the preceding evening bled Elizabeth & blistered her on the breast. What then must have been my anxiety to see this little suffering after having already gone through so much, now violently seized with the same disease! His breathing was extremely laborious, his skin hot, his pulse active, &

This state had been preceded by a chill. I looked at him with feelings of great anxiety; & as I looked it seemed as if every moment brought with it increasing danger. I do not know when I have seen a more violent & alarming case. I had him bled freely, gave him an emetic of ipecac, & directed, if not relieved, a blister to his breast. I expected 6 grains of ipecac would have excited his stomach; but his kind female attendants found it necessary to repeat the dose three times afterward, making a scruple in the whole. Even this did not excite full vomiting; but it relieved his breathing so much, that a blister was not applied.

16th. On my visiting him this morning I was much pleased in observing a favourable change in his symptoms. The activity of his pulse was reduced, & his respiration was far more natural. I directed 3 grains of calomel every 4 hours, until it should operate. I visited him frequently in the course of the day; & early in the afternoon, after the calomel had operated freely, finding him considerable restless & feverish, I directed him to be put into the warm bath. This was done. He remained about 10 minutes in the bath & was relieved by it. Afterwards small doses of sweet spirits of nitre & antimonial wine were given; & on visiting him late at night, he appeared so easy, that I ordered the medicine to be continued only when he

might be awake, & that when asleep he should not be disturbed.

17th. 18th, & 19th. During these three days no material change occurred. He went on gradually mending; tho' he had some slight turns which alarmed his affectionate mother. I found it important to attend particularly to the state of the bowels. Occasionally the warm bath, & bathing his abdomen with laudanum, brandy & sweet oil were resorted to. He recovered.

Case of Convulsions from Intestinal Spasm.

2nd mo. 18th, 1821.— Died yesterday an infant of E. C. aged about 5 months. This lovely little creature had been affected with attacks of epilepsy for several weeks before its death. At first several days intervened between the attacks, &, what was remarkable, they came on at one stated time, about, or a little after daylight. They came on instantaneously without any warning; & directly after an attack, the child would be quite sensible & even playful. From the best judgement I could form of the case, I concluded it was the result of spasm in the bowels, & directed my treatment accordingly. I attended particularly to the diet of the mother, advised abstinence from every description of flatulent food; &, at the same time, adopted a course of purging with castor oil for the infant, attended to the correction of acidity by the alkaline infusion, as in the case just related, & occasionally employed carminatives & antispasmodics, as fennel seed tea, assafatida, &c. The spice plaster

with frictions of garlic & brandy, alternated with the oil of amber combined with laudanum & sweet oil, was also used. I frequently directed the warm baths; & as there was, at one period, so much regularity in the approach of the paroxysms, I several times endeavoured to anticipate them by an opiate. But all these plans failed. They gave relief, but did not cure the disease. I used several calomel purges in alternation with oil, & the bowels were kept in a very free state. The stools often appeared very natural, while the fits still continued to recur. I tried the oil of amber internally, & used, very cautiously, anodyne enemata; but without any permanent benefit. The epileptic paroxysms were more frequent; the belly was often tympanitic; & in order to relieve this, I directed that the air should be abstracted from the bowels by means of the dry syringe — introducing it & then drawing out the piston. I suggested a change of the milk; & for a short time a nurse in the neighbourhood was obtained — this was towards the close of the case. The fits became more severe & distressing. Leeches were twice applied to the head, blisters were placed behind the ears, &c, &c.; but all in vain — it still grew worse. Between the fits it had several spasms or semi-fits — it would scream out & appear to be in pain. The attendants remarked, that they could "hear the wind rise in his body." At one time I directed chicken water instead of milk in any shape;

& a musk julap was also used, which, at one time, appeared to afford relief: but notwithstanding all this, the little lamb took its departure for heaven.

Dissection.— The intestines exhibited strong evidence of having been under the influence of severe spasm. More than half the small intestines were irregularly contracted & diminished in size — their caliber being much smaller than natural; the gall bladder contained a light coloured glairy fluid; the heart & lungs were perfectly natural. I did not examine the brain, as I thought sufficient evidence of the cause of death was found in the bowels. The omentum was found lying closely folded up, in the form of a small rope: it lay on the arch of the colon.

I have given these two cases, the one successful, the other unsuccessful, that, in the latter, you might have an opportunity of seeing the state of things disclosed by dissection. In reviewing the latter case, I propose as an improvement, a more early resort to the lancet, instead of leeches. This would, probably, have induced relaxation, & enabled the other remedies to act more effectually. A blister to the abdomen might have had a salutary influence.

I have since attended a case of this kind with Dr. Wood. I proposed the lancet — not with a view to guard against inflammation, but to resolve spasm, & to put the system in a condition favourable to the operation of antispasmodics. We derived great advantage from the musk

julap, laudanum, & a large blister over the abdomen.

General Principles.— If then you are called to a child affected with epileptic fits; if the convulsions are transient, & are not succeeded by coma; but the child recovers its reason immediately after the fit, appears pert, & looks about him as if nothing had happened; &, at the same time, the bowels are affected with pain & acidity, you may fairly conclude that the disease is the result of intestinal spasm.

Indications.— In a case of the kind I have described, if it be obstinate, you should relax spasm by V.S.; or leeches & the warm bath; evacuate the bowels by means of calomel, oil, &c.; apply a large blister over the abdomen; correct acidity by the constant use of the alkaline infusion; allay pain by opiates given by the mouth, or in the form of anodyne injections; resolve spasm by the free use of musk, oil of amber, & lac assafoetida, particularly the latter, administered both by the mouth & in the form of enemata; use the oil of amber, laudanum, & sweet oil, or garlic & brandy, externally; &, if the belly be tympanitic, extract the flatus by means of the dry syringe.

I will now mention two other cases of a mixed nature.

Case of W. R.'s child.— 1st mo. 1822. I lately attended the child of W. R. with croup. I resorted to V.S. blister to the throat, calomel, antimonial wine, senika, &c. The symptoms of croup went off, but were succeeded by strong convulsions. On enquiry, I found the stools were very acid, & the child evidently had pain in its bowels. I laid aside

all treatment for croup, gave a tea spoonful of the alkaline infusion frequently, resorted to the warm bath, & applied very freely to the spine & breast, a liniment composed of oil of amber & laudanum, of each a tea spoonful, sweet oil & brandy, of each a table spoonful. Poultices of bread & milk with the oil of amber were applied to the feet. In addition, the lac assafoetida was given both by the mouth & rectum. A surprising change for the better ensued, & the child happily recovered. – How important that the plan of treatment was changed! What would have been the consequence, if antimonials, calomel, senna, &c., had been continued!

Case of Catarrh and Colic.

3 mo. 20th, 1822. While I was absent yesterday in the country, a sucking infant of A. F. was attacked with severe dyspnoea & fever. My friend & former pupil, Dr. Emlen, saw it for me. He directed bleeding, a cathartic, antimonials, &c., to subdue the inflammation. I saw the patient with Dr. Emlen the following evening: it was then extremely ill. On examining the case I found that the primary affection was removed: but the little creature, as I listened to its language, told me that the bowels were in a state of great pain – in fact, I saw a counterpart, almost, of W. R.'s child. The stools were green. I proposed the same general plan of treatment, as in the preceding case, viz. the alkaline infusion, lac assafoetida, & the liniment used externally, &c. The result was most happy – he recovered.

Case of Dysentery and Mania.

I have before stated that spasm of the intestines is sometimes manifested by sympathetic affections of remote parts. In order to illustrate my position, I will notice the case of I. G's child who died under my care. It was affected with dysenteric symptoms; & in the progress of the case, became delirious. But treating it with a view to dysentery, the symptoms abated, & I supposed that the patient was convalescent. But soon after the child grew worse, & became completely maniacal; so much so that it was really distressing to see it. It showed a disposition to snap & bite like a dog at whatever approached it. Under these circumstances, my attention was strongly directed to the head. I supposed that there must be some serious cerebral affection to produce such a train of symptoms. Notwithstanding all my efforts, however, my little patient died. I obtained permission to open the body & examine not only the brain, but also the abdomen. There was no vestige, or if any, very slight marks indeed, of disease of the brain. This was the conclusion of both Dr. Hartshorne & myself. But the small intestines exhibited, at once, marks of the most violent spasm. In several places, for an inch or two, their caliber was diminished almost to the size of a worm, & nearly half their length appeared as if a tape had been tied round the gut. The brain was sympathetically affected, & the maniacal symptoms arose altogether from severe spasm of the bowels.

Reflecting on this circumstance, I recollected a fact which occurred when I was a child. I had a favourite pup which, on one occasion, running into the street, was trod on by a horse. I ran forward to snatch it from danger, & in the agony of the moment, it sized & bit me, its protector & master. This, I have no doubt, was the result of severe pain. Now the bowels are a tender & vital part, & every spasmodic twitch is like a pinch to them, & must cause a vast deal of pain.

Dr. Wistar related to me the case of a little girl, about 8 years of age, under his care, who continued maniacal for 3 weeks; when all the symptoms of mania disappeared in consequence of a free discharge of ascarides from the rectum. This is another proof that irritation of the bowels may excite a sympathetic affection of the brain, which may result in a disordered operation of the mind.

Sometimes spasm of the bowels may be induced by the introduction of improper articles into the stomach, independent of mere flatulent food. I will read you a case which fell under my notice in consultation with Dr. Emlen, in the spring of the year 1821, in which death was produced by eating an enormous quantity of orange peel.

Death from Orange Peel.

3rd mo. 18th. 1821. A. W. aged about 18 months, a lovely & interesting infant, was attacked about 3 o'clock yesterday morning, or at that time was first observed by the parents to be unwell. She had, it appears, a hot skin & sick stom-

ach, & vomited some undigested orange peel. The parents recollected that, the preceding morning, she had picked up the skin of an orange; & the little creature was in the habit of devouring every thing of the kind that came in her way. Dr. Emlen was called early in the morning. He found her with a suffused, purple face, & a pulse so feeble as scarcely to be felt, & too frequent for enumeration. He, very properly, lanced her gums; & then, after having ascertained the fact relative to the orange peel, gave an emetic; ordered the warm bath, sinapisms, injections, & castor oil. After the operation of the emetic, she had three stools consisting principally of orange peel. I was called in consultation about 11 o'clock. The pulse was not perceptible at the wrist; the countenance was livid; the innocent lamb was, at times, in extreme pain, crying out in the most distressing manner. It seemed on the borders of convulsions, tho they did not come. We both suspected the bowels to be the seat of the disease, & directed our attention to procure evacuations by means of oil & injections. A spread plaster was applied over the abdomen, & three drops of laudanum were given by the mouth: but soon after this, death closed the painful struggle.

Dissection.— The intestines exhibited marks of having been affected by spasm. There were two portions of the small intestines in a state of intus-susceptio. Dr. Harlan, who made the dissection, opened the small intestines with a pair of scissors from one end to the other. They

contained a large quantity of orange peel imperfectly digested; also worms. There is strong reason to believe that the orange peel was the cause of death.

I have now spoken of spasmodic affections of the intestines in children; I have also spoken of the same complaints in adults, as illustrated by cases of colica pictonum. But there is one interesting case among my notes which I will read to you. It proves that adults, though less sensible to the attacks of disease than infants, may be affected with spasmodic complaints of the bowels, which may gradually destroy life.

Case of Spasm of the Bowels with an Obstruction of the Ductus Communis Choledochus.

J. C., about 40 years of age, a very stout man, was subject to occasional spells of violent colic which generally terminated in a few hours: but nothing would relieve him till he had vomited bile very copiously. A few days before his last confinement, he had diarrhoea, for which he took some rhubarb. He sent for Dr. Lambert the 15th of 12th mo. I saw him on the evening of the 16th. His pulse was very feeble, & his whole system prostrated. His stomach rejected every thing: he had frequent small stools; but they were entirely destitute of bilious tinge – no bile was vomited. Various attempts were made to relieve him; but in vain. The secretion from the kidneys was suspended for about 80 hours; but the day preceding death it returned.

He complained of one sore spot below the epigastric region.

Dissection.— The small intestines were found contracted in several places. In some parts the diameter was lessened, as if a piece of broad tape had been passed round the bowel so as nearly to obliterate its cavity; & at these points the intestine was thickened. The colon contained a quantity of soft pasty feces. The gall bladder was enormously distended with dark bile. The pancreas was enlarged & hardened; & caused in consequence, nearly a total obstruction in the ductus communis choledochus. The pancreatic duct was open. The liver presented a natural appearance. The villous coat of the stomach was covered, in many places, with patches of dark colored blood, very similar to what occurs in some cases of malignant fever.

Causes.— It is probable that spasm, in this case, took place in consequence of a want of bile, resulting from a partial obliteration of the duct. Bile is a necessary stimulus to the intestines. Deprived of this they become debilitated. This debility inclines to spasmodic action; & the patient is gradually worn out by the pain he must necessarily experience. At first the passage through the duct was found by vomiting, & temporary relief was afforded: but when the obstruction became so great as not to be overcome by the efforts of nature, the patient gradually sunk.

Constipation.

Hitherto I have treated of constipation resulting from inflammatory action as in peritonitis, or from spasm, as in the various cases I have detailed. But I shall appropriate a portion of the present lecture to the consideration of that species of constipation which occasionally occurs under a very obscure form, & which may be confounded with a disease entirely opposite, even with diarrhœa. It is a fact which I am enabled to assert from some experience, that fæces may accumulate in the colon or rectum, & there prove the source of great irritation. The consequence of this irritation is an increased secretion of fluids from the mucous coat which passing between the side of the bowel & this impacted mass, may be discharged per anum, & the practitioner, if not aware of the circumstances of the case, may undertake by astringents to check the discharge, when directly opposite treatment is demanded. This affection may approach in a very insidious way. A person may have daily evacuations from the alimentary canal; & it may happen that he will discharge a part & retain a part, till ultimately the condition alluded to is induced. You may easily suppose that much pain & suffering must result; that the patient will make great efforts to procure discharges; and

that he may have liquid stools, but without relief. The neighboring parts also become affected – the pressure of the feces in the rectum may irritate the bladder, & disease of this organ may be suspected as the sole cause of the symptoms. The same remark will apply to the uterine system. You will find a description of this disease in the London Medical Observations & Inquiries. Dr. Fothergill relates a case of the kind. He was called some miles out of London to visit a patient affected with obstinate diarrhoea which had resisted a variety of treatment. He found the patient in great distress. Perceiving no relief followed the liquid discharges, his attention was directed to the cause; & he supposed that the whole depended on the presence of impacted feces in the bowels. With this view he told the apprentice of the apothecary to introduce his finger into the rectum; & it immediately came in contact with a mass of hardened feces. By his finger & other means it was broken down & removed, & the patient was relieved. In the same volume, perhaps, you will find an account of a lady similarly affected; but with symptoms very obscure. At one time it was supposed that the uterus was diseased; at another, the bladder. Much was done, but nothing gave relief. Some months elapsed before a practitioner was called in who understood the nature of the case. He suspected the presence of impacted feces; & an examination discov-

and them high up in the sigmoid flexure of the colon. The mass was removed; but too late to save the patient.

I was aware of these cases in the early part of my practice; & it so happened that this knowledge was of great importance to me in treating the disease. One of the first cases which fell under my observation was that of S. J. Some weeks after parturition, she was attacked with great pain & distress in the abdomen. She told me that she laboured under a fœtid lax: she gave it this name on account of the fetor of the evacuations. On enquiring into the case, & finding that she had been affected for some time, & no relief had been experienced, I suspected at once the presence of hardened fæces in the bowels. At the time I was called, she was taking opium, port wine & bark, with a view to strengthen her & check the lax. I explained to the patient my views of the case. She was able to comprehend them, & fully disposed to enter on the plan of treatment proposed. I first directed cathartic medicine; & oil was the article employed. It was retained by the stomach, &, according as we had anticipated, brought away from the bowels a large quantity of feculent matter, to the indescribable relief of the patient. She told me she suspected the mass had remained in the bowel 5 weeks: & when it was discharged, the first evacuations were so fœtid as almost to make her faint.

About the same time, I was called to a little

girl who seemed to be labouring under diarrhœa. But from the fact that no relief resulted from the evacuations; that the irritation was still kept up; & that so much fever was present as to require the lancet, I suspected the existence of accumulated fæces. Accordingly cathartics & injections were administered till she discharged large quantities of fæculent matter. After this she recovered. Symptoms of enteritis ensued, & she required several bleedings, the warm bath, & a blister to the abdomen.

I have sometimes known a quantity of indurated fæces to be retained in the rectum without very serious consequences. An old acquaintance applied to me in consequence of a constipated state of the bowels. I directed cathartic medicine; but there seemed to be some impediment to his evacuation. I explained to him what I believed to be the nature of his case; & with his own finger he broke down the mass, & relieved himself from his complaint.

I have known this affection to occur in children. I once had under my care a little boy who complained of great distress in his bowels, strained very much at stool, & passed a little blood. Finding the irritation was kept up notwithstanding the discharges, I suspected the presence of hardened fæces. Injections were thrown up; but they seemed to meet with some impediment. On examination with the finger, my suspicions were

confirmed. By means of the finger & the handle of a dessert spoon, I succeeded in breaking down the mass & bringing it away. Purgatives afterwards relieved him entirely. The diet was now made soft & laxative; & he ceased to be troubled with the complaint. In this case constipation was probably occasioned by the use of milk, as his diet had consisted principally of that article. I have since had several cases which originated from the same cause.

From these cases you may understand how necessary it is to be on your guard, when called to patients apparently labouring under diarrhœa; & how important to distinguish the two complaints. There is a material difference in the symptoms. When I spoke of diarrhœa, I observed that the patient felt considerable uneasiness when he went to stool; but that the discharges were free, & relief was, in consequence, experienced. But in the complaint now under consideration, there is great straining & distress; the patient has liquid evacuations, it is true, but they afford no relief.

After ascertaining the nature of the complaint the treatment is obvious. If the mass of feces is high up in the colon, you must depend on purgatives & injections. Either castor oil or senna, or jalap with cream of tartar will answer very well. If the purulent matter is in the rectum, you may bring in the assistance of mechanical means. The warm bath may be used to ~~[illegible]~~ relax, &c.

There is one condition which may be confounded with this deceptive constipation. I allude to those excoriations about the verge of the anus which sometimes occur in dysentery & diarrhœa. The skin in this part is very tender, &, if excoriated, will cause extreme pain after every effort to evacuate the bowels. The patient may have a free discharge; & yet will remain a long time on the close-stool, & will experience great irritation & distress. I have mentioned the case of a young gentleman, about 7 miles from the city, whose family as well as himself experienced great alarm on account of the excessive pain which followed every attempt to pass his fæces. From the account of the patient, I was induced to suspect excoriation; & on examination, found it to be the case.

Nothing more is necessary in such cases than to anoint the parts with a mixture of lard & laudanum, or to apply a soft poultice to which laudanum may be added.

Dyspepsia.

Dyspepsia may be defined to be a disease in which the stomach is incapacitated from digesting the food presented to it. The consequence is that very considerable derangement of the animal economy naturally results: because the influence of the stomach over the whole system is, as you are all aware, truly great.

I shall commence with taking a view of the causes which have the most important agency in producing the disease. The most prominent of these, & one on which I wish particularly to dwell, is derived from the operations of the mind. The influence of mind over matter is very great; & the stomach is often seriously affected by mental operations – many of these have an important agency in inducing dyspepsia. Excessive mental exertion, whether on subjects of a pleasurable or painful nature, but particularly the latter, may be regarded as among the most common causes of the disease. Severe study & close confinement operate very unfavourably on the stomach. Hence it happens that hard students are very apt to be affected with dyspepsia. Professional men whose occupations lead to much mental exertion, especially when they do not use much bodily exercise, are liable to suffer from this complaint. Physicians, though they necessarily use considerable exercise in attending their practice, yet suffer so much anxiety, are harassed by so many cares, that they are peculiarly liable to be affected with indigestion. Long continued depression of mind is a cause which I have often seen to operate when it was out of my power to afford relief. I have seen it in some of our ~~eminent men~~ commercial men who had been unfortunate in their business. I was one day called on by a respectable merchant of this city, who told me that he was affected with a complaint in his breast, & wished to consult me on the propriety of being bled. I soon, however, found that the stomach & not the breast was the seat of the disease – he was

labouring under dyspepsia brought on by mental depression, in consequence of failure in his business. Disappointment of any kind, but particularly of the tender affections, may be regarded as very strongly disposing to dyspepsia.

You should always remember the astonishing influence which the mind exerts over the complaint. The practitioner may go on dosing & dosing, till he has administered every variety of medicine, & yet produce no benefit to his patient: whereas, by taking a just view of the case, & examining into all the means of relief, he may be the source of health & happiness to his patient, without being in the necessity of calling in the aid of medicine.

Besides the mental affections there are many other causes which deserve attention. Intemperance in eating & drinking often induces debility of the stomach, & lays the foundation of obstinate dyspepsia. Sometimes indigestion from strong drink gives rise to incurable disease. Voracious eating, by which the food is not properly masticated, & an extremely foul state of the mouth, owing to the presence of a number of decayed teeth, & a neglect of the proper ablution, may be enumerated among the causes which give rise to dyspepsia.

Gout & rheumatism translated from muscular parts, occasionally take possession of the stomach, & produce all the symptoms of indigestion. I have known cases of this complaint ushered in by pain in some particular part of the body. Thus I have witnessed an attack of lumbago, which,

after continuing for some time, has subsided, the stomach has become the seat of disease, & obstinate dyspepsia ensued. The same patient has been attacked with pain in the arm, the disappearance of which has been followed by an attack of indigestion. I have known an alternation of symptoms - the stomach being relieved by the occurrence of pain in some other part, & vice versa.

No doubt there are many other causes: but I shall be content with those I have enumerated, referring you to books for such as I have omitted to mention.

Dyspepsia generally commences by a depression of spirits, which is unaccountable to the patient. He not unfrequently complains of a sense of distress & load at the stomach; sometimes of vertigo & pain in the head; or, as in the case of the merchant just mentioned, the disease is referred to the chest. But a medical man will generally discover the true seat. He finds upon closely examining the patient, that he is affected with uneasy sensations in his stomach after eating; that sour and acrid eructations occasionally take place; that the bowels are often painful in consequence of distension with flatus; & that the evacuations are small & discoloured. Obstinate constipation is a frequent attendant. Sometimes the evacuations are natural & of daily occurrence: but even in these cases they are generally small. This fact proves that dyspepsia may exist without any complaint of the liver; though hepatic disease has great influence in producing the complaint - of this, however, I shall speak more at large on some future occasion.

The tongue, in dyspepsia, is generally more or less furred, not only in recent cases, but also in those of a chronic character. But in some instances, & these are the worst cases, instead of the furred tongue, we find it smooth, red, & glassy. I have seen this occur in cases brought on by hard drinking, which terminated fatally.

Another symptom which is an almost invariable attendant, is a want of action in the cutaneous vessels. Patients with this disease, are apt to have cool skins, & are almost always troubled with cold feet. To the latter I wish particularly to call your attention, as an important part of the curative plan is founded on it.

As the disease advances, the patient is affected with an indescribable distress of stomach, particularly after eating – it is not an acute pain, but a disagreeable sensation, difficult to define, yet perfectly understood by those who have felt it. There is a sense of weight & distress about the region of the epigastrium, which paralyses all the energies of the mind & body. Along with this, eructations frequently occur; & sometimes spontanious vomiting affords relief for a short time. This discharge is often extremely sour; so much so, that I have known the teeth as much on edge, as though the mouth had been washed by an acid.

Some patients are very much affected with pain in the bowels in consequence of the collection of flatus, by which they are so distended, as to be rendered unable to discharge their contents.

Although vomiting, by throwing off the cause of offence, is, in many cases, the only plan for obtaining immediate relief; yet strange as it may appear, some patients obtain relief by taking food into the stomach.

In aggravated forms of dyspepsia, the system is sometimes very irritable; & so much arterial irritation takes place, that the complaint is occasionally mistaken for fever. In cases of long standing, severe palpitations of the heart are not uncommon attendants. Some patients are affected with a loss of appetite, & a total indisposition for food: others, on the contrary, have a morbidly increased desire for food, & indulge in eating to excess, to their own great distress. The complaint is generally attended with loss of colour, & much emaciation is frequently the result of its long continuance.

I have met with some instances of dyspepsia in young children. In one of these the disease was mistaken for a febrile condition, & treated accordingly, with nitrous powders & antimonials. On seeing the case, & taking an account of all the symptoms, I was convinced that he laboured under dyspepsia. The plan of treatment was entirely changed; an invigorating course was substituted, & the child completely recovered.

I have stated that there is generally a tendency in the disease to paralyze the exertions both of body & mind. This disposition to inaction requires on the part of the patient, strong efforts to resist it. In fact, his life frequently depends on his determination to struggle against it. I have known persons to give up the contest, yield to the force of the disease,

go to bed & die. I fully believe that some years ago, such would have been my situation, had I not been influenced by powerful motives to exertion. At one time my friends thought me dangerously ill, & many of them calculated certainly on my dying: happily it never entered into my calculations that my complaint would terminate fatally. I was a husband & a parent, & the welfare of a rising family depended wholly on my exertions. I recollect with surprise the fatigue of mind & body I underwent at a time when all my friends thought me unfit to be about, & were convinced that I was labouring under a mortal disease.

Cheerful company & conversation have a most happy influence in dissipating the distress to which dyspeptics are subject. I have frequently when harassed by such uneasy feelings as I have alluded to, gone into the company of my friends, engaged in some interesting subject of conversation, & forgotten, for a time, all my troubles. When the conversation ceased, the mind returned to its former condition, & I again experienced all that sense of uneasiness & distress, before so prominent.

As a consequence of dyspepsia, we often find the mind partially deranged. Hypochondriasis is a common result; & the most fearful apprehensions of evil are indulged by the patient. This, however, is far from being invariably the case. I have seen many dyspeptics without a single symptom of hypochondriasis. I would here impress on you the vast

importance of distinguishing between real & imaginary disease. In the course of my practice, I have met with hypochondriacs who have so accurately described certain complaints with which they supposed themselves affected, that I have been led to conclude that organic disease must exist, when the mind was, in fact, the seat of the disorder. I have known medical men to be completely deceived, & persevere in a long & rigid course of treatment, when the disease they were combatting existed only in the mind of the patient. On one occasion I was consulted by a gentleman from the country, who was impressed with the belief that he was labouring under very serious & incurable disease of the omentum. He was in a state of very great distress, & apprehended the most terrible result. On inquiring into the case, I found that he had been confined for three months to his room, & had undergone a course of mercury. He told me he was very much swelled, & said that the disease could be distinctly felt through the parieties of the abdomen. On entering into an examination, & exposing his abdomen, it presented as fine & healthy a mass of fat as I ever saw. The whole case was imaginary. The physician had fallen into the illusion, & by his plan of treatment had tended to confirm the belief of the patient. – On another occasion a hypochondriac presented himself to me, labouring, as he said under a terrible disease of his foot. On examination, I found that the disease was altogether imaginary; or, if there really was any disease, it must have been of the

nature of tic doloreux. I supposed that it was a delusive sensation, depending altogether on disease of the stomach. His physician, however, had been led astray by his representations; & a practice had been established as disagreeable to my feelings, as any that could possibly be imagined. A seaton needle, armed with a skein of silk, had been passed through the foot from the top to the bottom, between two of the metatarsal bones, & the silk was suffered to remain! It had been in harvest time, & allowed to remain several weeks during the warmest part of summer; & all this time, the patient was confined to a rigidly low diet. It is almost a miracle that he escaped tetanus. The practice could be justified on no ground whatever, & was totally irreconcilable with every sound principle of medicine & surgery.

After an attack of dyspepsia has continued for a long time; after various plans of treatment have been tried, & all have proved unavailing, it not unfrequently happens that the stomach without any known cause, assumes a healthy condition, & the patient is relieved. Sometimes I have known the occurrence of a spontaneous bilious diarrhœa to produce a cure of dyspepsia. In other cases, great debility & emaciation occur, the bowels become irritable, the tongue assumes a smooth & red appearance, denoting an erythematous condition of the alimentary canal, & the patient dies.

Dyspepsia is often complicated with pyrosis. An attack of this complaint generally comes on in the way I shall

mention: after food has been taken, which proves offensive to the stomach; after the sensation of weight & uneasiness has occurred, the patient will feel a disposition to throw off saliva. This continues to be discharged for some time, till at length, the patient all at once feels sensible of something resembling a spasm of the stomach. I have in my own case been as sensible of spasmodic action in this organ, as if I had seen it contract. At this time there begins a free discharge of limpid fluid from the mouth; & if the patient remain quiescent, it will run out in a stream till it has made a little puddle on the floor. This state of things lasts only a short time - generally from one to two or three minutes, & very seldom longer than five. By this time the spasm is relaxed & the patient relieved. The feelings of distress preceding the water-brash frequently continue from ½ an hour to 1 or 2 hours. Occasionally I have known the contraction to go on so far as to produce vomiting. The matter discharged is generally as acid as can well be conceived. — Cardialgia often attends this disease.

Sometimes after dyspepsia has existed for a long period; after the stomach has been subject to great distress, & the body is much emaciated, it happens that the parts connected with this viscus become seriously diseased. I have, in my collection of morbid anatomy, a stomach in which the pylorus is enormously enlarged. The case of the patient I will detail to you, & exhibit the preparation at a future lecture. In this instance distress of mind

seemed to be the principal agent in producing the disease. I will here make a remark which falls, in part, within the treatment to be pursued in the course of the disease. This is to caution you, in the strongest terms, against the practice of allowing dyspeptic patients to habituate themselves to the use of ardent spirits in any form. Some most lamentable cases of this kind have fallen under my observation. Patients suffering severely from distress of stomach, & depression of mind, are sometimes advised by their physicians to make use of ardent spirits, with the view of obtaining relief. This practice has laid the foundation of a great deal of drunkenness & subsequent misery, & has destroyed the usefulness of many who would have otherwise been useful members of society. I have an utter abhorrence of every thing like intoxication; & I should never be afraid to trust myself so far as to employ brandy & water for my complaint. One glass affords so much relief, & produces so great an elevation of spirits, that the patient is most strongly tempted to repeat it, till he is, at length, landed in habits of confirmed drunkenness. I have seen this happen in genteel life, & to females as well as to those of our own sex. A lady affected with dyspepsia finding that a little Holland gin produced a very comfortable effect on her stomach, whenever she experienced an attack of pain, very innocently resorted to this article. She went on gradually increasing the dose, till at last she was in the habit of drinking half a gallon of gin in a day! She ultimately destroyed herself by the practice. When I first saw her she was in a state of infantile weakness; her circulation was ex-

ceedingly feeble & irritable, & her tongue was smooth & red. She soon died. Before death there was an extraordinary loss of power in the limbs. The same thing happened in the case of a gentleman who was subject to dyspepsia & became a victim to intemperance. At times violent pains would attack his limbs & leave them utterly powerless. His condition was pitched in the extreme. At length he lost the command over the sphincter ani, & it was necessary to employ diapers with him as with an infant. In another case, that of a gentleman of this city, & much employed in public affairs, the same thing occurred. He was led innocently into the practice by experiencing great relief from small quantities of spirits; & excused himself by stating that his physician had recommended this plan to him in the commencement. This, however, the physician informed me was not the case.

I will here relate to you an anecdote told me by Dr. Parke who when a young man pursuing his medical studies in London, was intimately acquainted with Dr. Jno. Fothergill. Soon after he arrived in England, Dr. Fothergill spoke to him in the highest terms of the advantages to be derived from the use of brandy & water in dyspepsia. Dr. Parke resided a considerable time in London. When he was about to return to this country, Dr. Fothergill took an opportunity with him purposely to do away an error into which he had led him. In the course of his practice so many of his patients had become habitual drunkards that he considered it his duty to express, in the strongest terms, his decided

disapprobation of the plan which he had before recommended.

Before entering on the treatment of dyspepsia, I will take occasion to make a few observations on the importance of distinguishing between colic arising from an accumulation of flatus in the bowels, in other words dyspeptic colic & that which depends on an inflammatory condition of the system. A patient subject to dyspepsia is occasionally affected with the most excruciating pain in the bowels. The practitioner called in under these circumstances, aware that little dependance can be placed on the pulse in affections of these parts, is apt to be led into the belief that there is a great deal of inflammation, & that it is necessary to resort to the lancet. If it be a case of dyspeptic colic, this practice is calculated to do more harm than good. For, so far as my observation has gone, dyspepsia is not a disease of high inflammatory action; but, as a general rule, depends on a diminution of tone in the digestive system. Now, in what manner shall we distinguish the one from the other – how know the difference between dyspeptic colic, & that arising from an inflammatory state of the intestines? We shall generally be able to distinguish by making inquiries as to what preceded. If the patient has been subject to dyspepsia, & was at the time of attack labouring under the complaint; if he has been repeatedly affected with severe pain in his bowels, particularly after eating, & if this has soon disappeared either with or without a discharge of flatus, we may very fairly consider the case as dyspeptic colic. In enteritis, on

the contrary, after the disease sets in, it pretty certainly advances to a fatal termination, or a recovery takes place. There are none of those sudden transitions from pain to comparative ease that you find in dyspepsia. It is important to distinguish between the two affections; because bleeding which, in the one instance is the grand remedy, in the other can do no good & might produce much harm, especially if the case has been preceded by considerable debility.

I will now for a few moments, call your attention to the physiological consideration of some parts of this subject. You are aware that among the old physiologists an opinion was entertained relative to digestion, differing materially from that which is held by the moderns. It was supposed that fermentation had a great deal to do with the digestive process. But the experiments of Spallanzani & others dissipated this delusion, & clearly proved that the phenomena were all dependent on the solvent power of the gastric liquor. Now this I firmly believe so far as regards the operation of the stomach in health. But I also believe that in a state of disease fermentation may go on, & that articles which readily undergo this process, if introduced into the stomach, will aggravate the complaint. Moreover, I am of the opinion that the stomach itself, when in a disordered condition may secrete an acid which may be the cause of great distress to the patient.

By consulting Spallanzani & other experimentalists you

will find it established, that the stomach digests certain kinds of food much more easily than others; & as a passing remark, I will state that, if my recollection is correct, Spallanzani found that the aliments which longest resisted the action of the gastric liquor, were such as had been exposed to the operation of frying: for instance the crust which usually surrounds veal cutlet.

In considering the treatment proper for dyspepsia, in choosing that kind of diet which may be suitable for the patient, it is necessary for physicians to take all these circumstances into view. In a system of dietetic treatment, he would reject all such articles as are likely to pass into the acetous fermentation. Hence one of his first directions to the patient would be to refrain from all fresh fruits & vegetables, such as cabbages, turnips, beets, &c. And we rarely ever meet with a dyspeptic who does not inform us that he is scarcely able to take these articles, particularly cabbage. It is my rule to prohibit them all, without a single exception; I do not allow even the potatoe to be eaten. There is another article of diet proper to be remembered - Coffee generally exerts an injurious influence on the dyspeptic stomach; & tea also disagrees with many. The black tea, however, is said to be less objectionable than the green. All kinds of pastry or pye crust should be avoided. The same remark will apply to hot cakes & hot bread, particularly buckwheat cakes & shortcakes. After mentioning so many kinds of aliment to be laid aside, you will be almost ready to inquire, - What is the patient to eat? This

will lead us to consider the kind of aliment proper for dyspeptics. And here I am prepared to say that, as a general rule, admitting however of some exceptions, solid animal food, simply prepared is far more acceptable to the debilitated stomach than those acescent aliments just mentioned. Hence beef, mutton, venison, poultry, &c. should be preferred. But as I have observed there are exceptions to this kind of diet – I once had a patient who was rendered extremely uncomfortable whenever he took a small portion of animal food, in consequence of the distension by flatus generated in his stomach & bowels. In some cases condiments answer very well; not only salt & pepper, but even mustard & horse-radish may be used. The last is an exception to the rule relative to fresh vegetable food.

In addition to these you should look out for some farinaceous articles which are capable of conveying nourishment without becoming acid. Hence the importance of rice in dyspepsia. If boiled till it has become extremely soft, it is in some cases well suited to the stomach. It may be eaten with a little sugar & fresh butter. Stale bread, bread made of unbolted flour, pretzels, & crackers, are allowable. The latter suit some stomachs very well, with others they do not agree. Stale bread is decidedly preferable to fresh & hot bread. There are other articles which answer very well for dyspeptics – soft-boiled, or poached eggs, are often digested easily when other aliments are rejected. Oysters also are, in general, very suitable. But every thing with these depends on the mode of cooking; & there is no

article of food which is prepared more variously. They are frequently fried, & in this state they should never be given to a dyspeptic. Surrounded by that crust which was found so strongly to resist the operation of the gastric juice, & impregnated with a kind of empyreumatic oil resulting from the melted butter, they must necessarily be very indigestible. When eaten raw they are, on the contrary, very easy of digestion; & they should always be taken in this state or only slightly cooked. To raw oysters I have heard that some object on the ground that they are living, & as substances possessed of life cannot be acted on by the gastric juice, they must be of difficult solution in the stomach. This is frivolous: after being taken out of the shell & subjected to the process of mastication, they cannot, I think, possess so much life as to present any obstacle to their easy digestion.

It sometimes happens that solid aliment will not answer well in cases of dyspepsia. Under those circumstances I have found the essence of beef an excellent substitute. Taken with crackers or stale bread, it is sometimes very acceptable to the stomach. Ham is, in some instances, very proper for dyspeptics.

So much for the common articles which may be selected from the table. Others do not occur to me at present; if I have omitted any they must fall under the general rule, viz. that all those substances which are of difficult solution in the gastric liquor, & are apt to pass into a state of fermentation, must be avoided.

These remarks apply to the meal taken at dinner. But what may be used in the morning & evening, as substitutes for coffee & tea? – and here I would state that there is a great variety in the stomachs of different individuals. In searching for substitutes for coffee, we must consult the peculiarities of the patient himself. In some instances the rye coffee, or even that made of barley, or wheat, when well prepared, with the addition of sugar & cream, will prove palatable & wholesome. Supposing that the stomach will not bear this, we may resort to chocolate prepared so as to be deprived of its oily constituents, or to milk. The latter article operates on some dyspeptics in the most friendly manner. For weeks together, when affected with this disease, I have lived almost exclusively on milk, & have found it very acceptable. Lime water & milk will be found a good substitute for coffee & tea. I have drunk gallons of this article. But substances which agree well at one time are inadmissible at another, & hence it is sometimes necessary to lay aside milk. In such cases we may often resort with advantage to cream. Milk, you know, is composed of three parts – the serous or whey, the caseous or cheese, & the oleaginous or cream. Hence the stomach in digesting milk acts on a considerable quantity of curdy matter which is very difficult of solution in the gastric juice. Cream, in a great measure, is free from this, & will therefore answer in some instances where milk is found to disagree. If neither milk nor cream should prove acceptable to the stomach, a breakfast of eggs prepared as I shall mention

may be prescribed with advantage. I have often recommended the yolks to be beaten up with loaf sugar & warm water, with the addition of ginger or a plenty of nutmeg, & taken as the morning meal. The water should not be boiling hot, as in that case, it is apt to curdle the egg.

A good deal has been said about the proper kind of food: a question now arises, – What articles are suitable as drink to persons afflicted with dyspepsia? After much experience I have come to the conclusion, that no fluid is so proper, especially at meal times, as pure water taken in moderate quantities. It should never be swallowed in large draughts, as, in this case, it will often prove injurious.

The stomach will frequently be affected between meals, particularly soon after eating, with those sensations extreme distress to which I have before called your attention. To such cases I have found the ginger tea admirably well adapted as a drink. It is calculated to impart a genial warmth to the stomach, & is perfectly inoffensive as regards both the body & the mind. As to spirituous liquors, I have already expressed my opinion: that though they generally yield a temporary relief, yet their consequences are so much to be dreaded – the patient who begins to use them is so apt to be landed in habits of confirmed drunkenness, that they should be entirely proscribed in dyspepsia. If stimulating drink is absolutely necessary, unquestionably the best is sound old Madeira wine. It should be however, of the very best quality. The common low wines, by becoming acid, are calculated to disorder the stomach.

So much for the food & drink proper for patients with this complaint. But the dietetic plan constitutes only a part of the necessary treatment. There are other views which must be taken, & to these I now proceed to call your attention.

I have before spoken of the state of the surface in dyspepsia. It frequently happens that a collapse of the surface takes place, indicated by the pallid countenance, the cool skin, & particularly by cold feet. The last is a very general symptom. To restore action to the extremities is of the utmost importance in the cure of this disease. For this purpose I will mention to you a very simple & yet efficacious plan, for the introduction of which, so far as I know, we are indebted to Dr. Physick. The patient is to wear under his stockings, socks of flannel which are to be well powdered daily with red pepper. I have seen much good result from this simple remedy. But it frequently happens, when the patient has been long subjected to cold feet, that the skin is brought into such a state of collapse that the Cayenne pepper is unable to take hold, & the desired effect is not produced, even though the application may be continued for a considerable time. In such cases, I direct the feet to be immersed every day in warm water, rendered more stimulating by the addition of mustard, salt, or some other article calculated to produce excitement. The feet when taken out, are to be wiped dry, & the Cayenne peppered socks are then to be applied. This plan seldom fails to bring about a genial warmth in the feet.

In addition to this, if there appears to be a want, if there appears to be a want of action, a coolness of the whole surface, I have been in the habit of directing frictions with fine salt over the whole body, till considerable cutaneous excitement is produced. In the case of a lady subject to dyspepsia, in whom debility amounted almost to atrophy, I have derived much advantage from the daily use of the tepid salt bath. It was used by her during one whole winter, & both in her opinion & my own, with a salutary effect. The salt bath I have frequently recommended.

There are other modes of bringing about heat & action in the surface of the body. Certain kinds of exercise, by giving an impulse to the circulation, & determining to the skin are very important for this purpose. Jumping the rope is an excellent practice: but what for females is still better, since it unites usefulness with health, is the habit of rubbing furniture. In the houses of our wealthy citizens, where I am in the habit of attending, I often select some particular article of furniture, & tell my female patient that I expect to see it kept bright by her own hand. This practice is very useful when you wish to excite heat & action in the skin. Riding on horseback also proves very beneficial. But it is of the utmost importance rightly to time exercise - to know when to be still, & when in action. The physician by an indiscreet recommendation of exercise, without reference to the time of using it, may do a great deal of harm. I lay it down as a general rule in dyspepsia, that muscular exertion has consider-

able influence in retarding the digestive process in persons of delicate habits. Hence, when you have to manage a system which requires a concentration of all its energies in the stomach for digestion, you should be very careful how you recommend exercise & muscular exertion after eating. – I will mention an experiment which illustrates very strongly the position I have laid down. Two hounds were both fed with a plentiful meal. One of them was allowed to indulge his natural inclination of lounging about the house & sleeping; the other was taken out on a hunt. After a certain time had elapsed both were killed. The one which had remained quiet had digested his food; in the other it was found that the digestive process had been suspended. Now from this fact, we may draw some very important practical inferences in the management of dyspepsia. You see all at once the propriety of advising to rest after eating, especially after dinner. I am not disposed to recommend the habit of invariably retiring to bed & taking an afternoon nap. This I conceive to be a bad habit, especially for young people. But great advantage certainly results from remaining at rest for a short time. I know from my own experience that if called to use much exertion after a meal, when under the influence of dyspepsia, there will be much distress & the stomach will be very likely to discharge its contents. Always, therefore, keep this fact in view when you prescribe for indigestion.

It sometimes happens that dyspeptic patients who, through the day, are in the habit of using much exercise & of throwing off their food from the stomach, will nevertheless retain the meal taken just before retiring to bed. For persons in

full health, supper is an unnecessary meal, & in plethoric cases, there is some reason to suppose that it has laid the foundation for apoplexy. But with dyspeptic patients who are apt to vomit their food, I do know that supper is often a useful meal, & is apt to be better digested than any other. I recollect the time, some years ago, when I was very much afflicted in this way, & supper was almost the only meal which was so far digested as to carry nutriment into the system. The supper I have generally resorted to consists either of eggs slightly done, or of oysters, sometimes raw, sometimes warmed in the shell, or stewed a little. There are, I know, some patients with whom suppers totally disagree. But this is not the only case in which we find exceptions to general rules in dyspepsia: for the stomach is exceedingly capricious & often sets rules at defiance.

Now, the digestion of the dyspeptic is specifically different from that of a hard labouring man. The kind of food suited to the former, the latter, particularly when compelled to use more than a common proportion of exercise, would generally dislike. The labourer requires strong aliment – something that will keep his stomach employed, something that he can feel. To support him under powerful exercise, an appropriate stimulus to the stomach seems to be necessary.

Having said thus much relative to exercise, I will pass on to the consideration of another subject. In the commencement I told you that causes operating on the mind, and particularly those which occasion a state of mental anxiety, contribute greatly to increase the distress of dyspeptics, & may

sometimes be regarded as giving origin to the disease; that in some cases the causes are entirely beyond our control; and that in others we can do much towards soothing the mind & inducing a train of pleasant thoughts. Hence the advantage of travelling. By the change of scene & the variety of occurrences the mind is called off from its attention to those objects which have a tendency to depress it, and to aggravate the complaint. But merely to travel is only accomplishing half the desired object. When you advise a patient to take a journey, you should not be content with merely sending him forth to travel hither & thither, with no other end in view than simply exercise. He should be advised to make a journey to the sea shore, which I highly recommend; or directed to some mineral spring, & impressed with the belief that the waters will be very advantageous to his health. I am inclined to believe that the change of scene, relaxation of mind, & the pleasures of society, have as much to do as the waters themselves, at most of our summer resorts. Some of the springs, however, are to be excepted. The waters of Ballston & Saratoga are highly charged with a number of medicinal articles. They frequently operate as a cathartic, & in this way prove useful in many cases. They are also chalybeate & impregnated with carbonic acid gas; & on both these accounts are well calculated to give tone to the debilitated stomach.

As the bowels are very apt to be in an irregular state in dyspeptic cases, it is a point of the utmost consequence to attend particularly to restoring them to a proper condition.

In the commencement of an attack, when the patient has a good deal of vigour, much advantage may result from taking cathartic medicine, so as to keep up moderate purging several times a week. But in cases of a chronic character, it becomes absolutely necessary to put the bowels into a proper state. How is this to be done? Is medicine always necessary? If they can be kept regular without resorting to medicine, we should certainly not employ it. By regular habits much may be accomplished. The dyspeptic should habituate himself to go to the privy every morning whether he has a call or not. In this way the habit of daily evacuations may be established; & at length the bowels will feel as uncomfortable if the custom be neglected, as from the infraction of any other habit. Sometimes, however, this plan is insufficient, & medicine must occasionally be taken. Standing first in the list as combining both a cathartic & tonic power, is undoubtedly rhubarb. This may be taken in several ways. The best plan is to take several simple rhubarb pills every night at bed time, so as to procure one or two evacuations in the day. Some patients prefer chewing the root; others again like it best in the pulverized state; & in this respect the taste of the patient may be consulted. But care must be taken, even in the use of rhubarb; for the bowels may become so habituated to it, as to be unable to do without it. An old lady whom I attended at times for several years, informed me in her last illness that for 30 years she had been accustomed to take a dose of rhubarb every night; & the practice was continued till within

two or three days of her death. So strongly was the habit fixed that it was one of the last given up. She was between 70 & 80 years of age.

Other articles may be advantageously combined with rhubarb. The addition of a little soda in the state of subcarbonate, is sometimes useful. I have used with much advantage pills made in the following manner:

Take Rhubarb.
Subcarb. Sodæ exsicc. āā ℥ss
Saponis - q.s. M. f. pil. XX.

Instead of this, some patients will bear very well a combination of aloes & rhubarb with a little calomel.

Take Aloes
Rhubarb
Subcarb. Sodæ exsicc. āā ʒii
Calomel - - - gr X
Oil caraway - - gtt X
Extract Gentian. q.s. M. f. pil. XL.

This is one of the best formula for compound purgative pills that you can resort to. I will mention another formula.

Take Aloes
Rhubarb āā - ʒi
Gamboge gr V
Oil of caraway, gtt. X

Mix and divide the mass into twenty pills, two of which may be taken at once & repeated as often as circumstances seem to require. The following formula may also answer very well:

℞. Sal cinchonin, ʒ½
Sub carb. Sodæ, exsic. ℥j
Capsicum
Caryoph.
Aloe soc. āā gr. x. M. f. pil. xx.

Two of these pills may be taken three times a day. you may, in some cases, advantagiously use the following:

℞. Sal cinchonin. ℥ij
Sulphas Ferri exsic.
Capsicum āā ℥j.
Caryoph. — gr x M. f. pil. xx.

In some dyspeptic cases I have found the discharges very small & very dark. Here, before putting the patient on any important treatment, it is right to bring about a change in the bilious secretions; & for this purpose the plan of Hope answers very well. This is to give calomel in small doses frequently repeated, say ⅙ of a grain every half hour, till two grains have been taken, & next day a little rhubarb, & so on. This will generally correct the disordered action of the liver, to produce yellow & more copious stools, & thus pave the way for the administration of remedies to act on the stomach. So much for the bowels.— I ought to mention, however, that some stomachs will not bear medicine or food. In these cases the nitro-muriatic acid bath may be used as a pediluvium, or with frictions over the region of the liver.

I have told you heretofore that in many cases of dyspepsia there is great acidity of stomach accompanied with a

feeling of indescribable distress, to be conceived only by those who have experienced it. To remove this sensation many persons are in the habit of resorting to spirituous liquors which generally yield some temporary relief. You already know how highly I disapprove of this practice. I now wish to call your attention to such remedies as will give relief without any danger to the morals. Various antacids are useful for this purpose. You are well aware that both the vegetable & mineral alkalis have the effect of correcting acid. The same may be said of the volatile alkali. Magnesia also has a happy effect in this way. To neutralize the acid of the stomach, & at the same time to operate on the bowels, this medicine may be used with great advantage. The calcined magnesia may be given in the dose of a tea spoonful at a time. A very handsome preparation of this article is what is called Cullen's liquid Magnesia. This is generally acceptable to the stomach & has a very happy effect as an antacid & laxative. To answer the same end I would highly recommend the Sidlitz powders. These are prepared by our apothecaries in imitation of the celebrated Sidlitz waters of Germany. One of these powders taken an hour after dinner, when the stomach is greatly distressed & the bowels are bound, will often prove beneficial. But Magnesia & Sidlitz powders are to be taken only when catharsis is desirable - sometimes this is not demanded; & then we have reference to those antacids which do not affect the bowels. At the head of the list, I would recommend the salt of tartar properly

blended with the aromatic spirit of ammonia. In my own case, I have never found any thing so effectual in dissipating the uneasiness produced by acid in the stomach. I generally take from 10 to 20 grains of salt of tartar & add 15, 20, or 30 drops of the aromatic spirit of ammonia, & mix these with two table spoonful of cinnamon water, or simple water. I will give you a convenient formula for administering the medicine.

℞. ~~Carb. Carb.~~ Potass.
Sp. ammo. vol. ā ā ℥ ii
Aqua Cinnamo. - ℥ iv

From a dessert to a table spoonful of this may be put into a wine glassful of water & taken at a dose.

In addition to these I will mention a remedy which certainly deserves consideration, & which goes to show that medical men should not too hastily despise an article because it emanates from a source they may be inclined to treat with contempt. Dr. Rush used to advise us in his lectures to habituate ourselves to converse with nurses & old women, as we might derive from them many useful practical hints. Many years ago, in Bucks county, there was an old farmer who united with his business that of an empiric, & became remarkable for his success in the cure of colic; so much so, that he was sent for by all the country around him. The medicine he employed was for a long time unknown. At last it was found to be a preparation of hickory ashes and soot.

One of the first cases I recollect of hearing in which this remedy was tried, was related to me by the late Dr. Woollens - it was that of his mother. She was subject to attacks of colick, & in one instance many remedies had been tried without effect, till this article was resorted to. It produced the desired effect. Dr. Woollens mentioned it to Dr. Physick when he was under the influence of dyspepsia, who immediately seized hold of it, & was very much pleased with its influence in his own case.

I direct it to be prepared in the following manner: One quart of fresh burnt hickory ashes & a small tea cupful of soot are to be mixed together & water gradually added till 3 quarts have been used. I then direct it to stand for 48 hours. It may then be decanted into bottles & corked up. The dose is a small wine glassful 3 times a day; to be taken after eating. If too strong, it may ~~del~~ diluted with water, so that the patient may take for a dose a wine glassful of such a strength as may be agreeable to him. In some cases of dyspepsia, this remedy produces the most happy result. I have seen it effect a cure of itself, when other methods of treatment had failed. A gentleman just hither from Barbadoes on account of his health, came under my care with this disease. His stomach was very much troubled with acid. I placed him on the use of the alkaline infusion with a proper diet, & in a short time he recovered. So much was he pleased with the remedy that, ~~before his return~~, he selected a quantity of hickory wood which he took with him to the West Indies.

There is an article which, at one time, acquired considerable reputation for the relief of dyspepsia, especially when accompa-

nied with acidity of stomach: I allude to the white oxide (subnitrate) of bismuth. I have no doubt that cases have occurred which justify the high character given to it. But there are many in which it will not succeed. I have not had much experience with it: but in two cases which occurred to me, it certainly seemed to produce some benefit. One patient had been subject to intemperate habits, & was affected with great acidity of stomach. I have known it used by a lady of my acquaintance, who for some time derived evident benefit from it. Ultimately, however, as is generally the case with such articles, it lost its effect & was laid aside.

In some cases where the stomach has lost its tone & the appetite is considerably impaired, I believe that advantage may result from the use of some vegetable tonicks, as quassia, gentian, columbo, &c. Quassia is one of the best. I frequently prescribe it in cold infusion — half an ounce of the shavings to a quart of water: some bitter orange peel may be added to improve the taste. After it has stood a sufficient time, the liquid is to be decanted, & used in the dose of a wine glassful several times a day. Dr. Wistar was in the habit of employing the extract of quassia. This is a handsome preparation, & from the smallness of its bulk, may be conveniently administered in the form of pill.

The chalybeate preparations may be resorted to when the stomach is weak, & there is no inclination for food. Dr. Rush's celebrated tonic powder was made of gr. x of the rubigo ferri, gr. x of powdered columbo, & gr. x of ginger. This is very useful in debility of the stomach. There is a gentleman in this city,

who entertains the belief that iron in a state of purity, has a much better effect on the stomach, than any of its chemical preparations. I have occasionally employed it in the shape of filings, & in one case it evidently had a salutary influence.

When there is great languor of the stomach & a disposition to pain & uneasiness, I have occasionally prescribed with advantage aromatics in the form of a pill.

Take Nutmeg
Mace
Cayenne pepper āā ʒj
Conserve of roses q.s.

Mix & divide the mass into twenty pills, two or three of which may be taken for a dose.

When the stomach is very irritable, & there is great difficulty of retaining the aliment, the opiated plaster, made as I have before told you (see) may be applied with considerable benefit. But there are some cases, (happily they are few,) in which the stomach becomes so exceedingly irritable that no aliment of any kind can be retained. Dr. Wistar in his lectures used to mention a case of this kind, where there was great danger that the patient would die from inanition. After exhausting all the remedies which his judgement suggested as applicable to the case, without any advantage, he determined to let the stomach entirely alone & to nourish the patient altogether by nutritious injections. For nearly 3 weeks the patient was sustained in this way. Rich animal soups, without seasoning of any kind, (as this by stimulating the rectum might cause them to be rejected,) were thrown up several times a day. Thus the system was

nourished & the stomach allowed to rest till it had recruited its powers & become able to retain the food introduced into it. I have in a few cases imitated this practice; but though some advantage resulted, I have never been so successful as Dr. Wistar was in the instance just related.

I might mention a great variety of other articles which are employed in dyspepsia with more or less advantage; but it is foreign from the design of these lectures to enumerate them all.

Before leaving the subject of idiopathic dyspepsia, & taking up the consideration of the disease as connected with others, I wish to call your attention to a subject exceedingly interesting: I allude to the caprices or vagaries of the stomach. I shall commence by saying a few words relative to the language of this organ. When treating of cholera infantum, you may recollect that I called your attention to the language of infants, long before they had learned to converse by words. I mentioned that mothers & nurses who have such frequent opportunities of studying this language, acquire a better knowledge of the diseases of infancy, than is frequently possessed by the experienced practitioner. In the same way the stomach has the power of expressing itself; & the physician who wishes to become successful in the treatment of its diseases, must pay attention to its language. It not unfrequently happens that patients labouring under dyspepsia have been led through a long continued & systematic course of practice, such as I have pointed out, & the physician after attending them for months, finds that the disease continues unabated. This is certainly mortifying. It may happen that anxious

to gain his object, he may still persevere, & restrict his patients to a rigid plan of diet; still, perhaps, he does not succeed. At last the patient will inform him that he has felt a very strong propensity for a particular kind of food. Dr., he often asks, may I not eat this? By no means, is the reply – you will certainly be injured if you do. The patient is disposed to submit; but still the stomach calls aloud for the article, till it becomes impossible any longer to resist it. Frequently, however, we have false desires which may very properly be called the spurious language of the stomach. A patient who has long been sick, becomes fretful & uneasy, & seeing others enjoying themselves around him, without being able to participate in their pleasures, sets himself about searching for some kind of food that may suit him. One article after another becomes the object of his unsteady wishes, & perhaps he may call for several in a single hour. This is the spurious language of the stomach, & is rarely attended to without disadvantage. But when a strong propensity arises for some particular article, for which no reason can be offered; when this propensity is fixed & long continued, resisting every conviction of what is proper or correct, & almost compelling the patient to yield to it, we may then conclude that the stomach speaks in the true dialect, & we should always obey its dictates.

Articles which at one time suit the stomach, at others will not remain on it. Thus I have known a patient who for some time lived exclusively on beef – he used it morning, noon, & night; & it was the only substance which was not rejected after eating. At last, however, the stomach revolted

& that had before been acceptable to it, now proves as certainly emetic as ipecacuanha. The same remark applies to other articles. I have known milk for two or three weeks together to be used to the exclusion of all other kinds of food; yet at length it became disagreeable & could no longer be used with comfort. Hence, when the stomach calls for certain articles, let the physician remember that they should not be too long continued – they should be persisted in no longer than they are found to be acceptable.

A gentleman in this city was, many years ago, attended by Dr. a very respectable practitioner, now deceased. I have heard the Dr. Relate the anecdote, & the gentleman having since become a patient of mine has confirmed the account. He was affected with dyspepsia accompanied with great acidity of stomach. The Dr. led him through a long course of antacid medicines, & subjected him to a very rigid treatment. But after he had been attending him for 3 months, the patient was no better. At length the stomach spoke, and its language was irresistible. It called for pickles & vinegar – the very articles which, under ordinary circumstances, would have been considered most injurious. He was compelled by this apparently morbid inclination to break thro the medical regulations. He soon found that the language was correct; & by persisting in the use of pickles & vinegar, in a short time he recovered from the disease.

This anecdote was related at a meeting of the College of Physicians, & gave rise to another of the same nature. Dr. Hewson mentioned the case of a lady who recovered

from dyspepsia in consequence of indulging in the use of strong fat pork & Indian dumplings; two articles as little likely to be recommended for this disease, as any two that could be selected from the whole list of aliments.

Many instances of this kind might be cited, where the stomach has called for a change of treatment, & where the call has been advantageously obeyed. The great danger is for mistaking the spurious dialect for the true language. In the one case the patient is constantly wavering in his desires, in the other a fixed & unalterable propensity arises for a certain thing, without which it seems impossible to satisfy the stomach. With a knowledge of this fact, the physician will often succeed when others have failed. Hence, in my own practice, after leading the patient through a regular course of treatment, such as has been mentioned, & finding it unsuccessful, I attend to the languages of the stomach. I even go so far as to impress on the patient the importance of attending himself to his desires, & of endeavouring to discover whether there is some prominent article for which he has a fixed propensity; & though this may seem improper, yet I encourage him to give it a trial.

Among the vagaries of the stomach, it may be mentioned, that, on some occasions, articles which you would suppose calculated to increase acidity, will, in fact, correct the unpleasant sensations arising from this source. I have known purified sugar in the form, for example, of sugar candy, to be taken by dyspeptics affected by acidity of stomach, with striking advantage. Similar benefit has resulted, in

some instances from other saccharine articles, as the different kinds of jellies. One of these, the Guava jelly from the West Indies, is admirable well suited to the dyspeptic stomach. On some occasions I have found it to be well adapted to my own case; on others, it has been rejected. I was once passing up the river Delaware, & my stomach was in a condition to reject every thing offered to it – when I felt a strong desire for a glass of lemonade. I gratified the desire, & was pleased to find that all the unpleasant sensations were removed. Hence, you may lay it down as a rule in practice, whenever a patient labours under dyspepsia, after trying a systematic course of treatment & finding it unavailing, you should let the stomach speak, & you will often be gratified with the result.

Instruct the patient to avoid if possible the habit of vomiting his food. When the stomach becomes irritable & very generally rejects whatever is introduced into it, the habit may become so fixed, that it shall look as regularly every day for vomiting after eating, as the bowels do for their daily evacuation. You should inculcate the necessity of overcoming if possible, this disposition; & such advice to the patient is the more necessary as he is apt to encourage the stomach in throwing off the food, on account of the great relief which he thus experiences. I will venture to assert that the patient may do a great deal in overcoming this propensity to vomit. Sometimes you will find that it cannot be restrained; but at others the mind has considerable control over this viscus. I have been placed in situations where I have felt a disposition to vomit, & might have done so with the

greatest ease, & yet I have restrained it for hours, till at last it disappeared.

Some patients have lazy stomachs which will grumble & growl all the time they are at work; yet, if you keep them to it, they will finally accomplish their task & digest food.

With regard to medicinal articles too, which are apt to produce nausea, I have some experience. I was convalescent from an attack of bilious fever, when Drs. Wister & Griffitts who attended me, thought it important that I should take Peruvian bark. My stomach nauseated at the idea: but I was determined to overcome this feeling, & to retain the medicine if possible. I tried it, & was successful.

Before closing the subject, I will make a few remarks on a description of dyspepsia which has occasionally fallen under my notice, & has invariably proved fatal. It occurs generally in elderly people, between 50 & 60 years of age, & attacks the temperate as well as those of different habits. Suppose a man of this age, who has lived temperately, & has hitherto enjoyed good health, begins to lose his colour, grow thin, & to show a disposition to break. The stomach becomes affected with dyspepsia; the patient has no appetite, & if he takes food it is apt to be rejected. The bowels are often irritable, though they are sometimes constipated. At last comes the red, smooth tongue. This is always a bad sign in dyspepsia, as it indicates an erythematous condition of the whole ali-

mentary canal, which it is difficult to correct. The patient, however, still keeps about; though he is very pale & much emaciated or bloated. The lips lose their colour, & the ears assume a deadly whiteness. The same is the case with the hand; & sometimes I have observed a thickening & chalky appearance about the roots of the nails. The patient gradually becomes weaker; his lips swell; he totally loathes food, & at last sinks into the grave. I have seen several cases of this kind, & have treated them variously; but they have all proved fatal. I have attempted to attend to the language of the stomach; but it seemed as if this organ, having done its days work, had become dumb, & spoke not. The complaint is more common in males than in females: I have, however, occasionally seen it in women.

As somewhat connected with this subject, I will here relate a case of which I made a note at the time of its occurrence.

1807, 7th mo.

Case of Scirrhus of the Stomach & Mesentery.

In company with my friends, Drs. S. P. Griffitts, & S. Duffield, I examined the body of James Bright who died of atrophy. He had previously been attended for some time by Dr. Griffitts. He had experienced great pain, which he always referred to the epigastric region. During his life, a very hard tumour could readily be perceived by pressure on the part. He had diarrhoea & frequent vomiting. There were several conjectures ut-

ative to the nature of the disease. It was uncertain whether the tumour was an enlarged lobe of the liver, a diseased portion of omentum, or, as a French physician conjectured, an enlarged spleen.

On opening the abdomen, we discovered the tumour to be the pylorus, enlarged beyond what any one could have supposed. The disease extended along the stomach, particularly its lesser curvature, & the coats were very much thickened. On laying open this viscus, a large tumour was found on the internal coat, near the valve of the pylorus – it was equal in size to a small hen's egg. The mesenteric glands seemed to have united in one uniform mass of disease. It was concluded they were enlarged 20 times their natural size. Hence, we were not astonished at the man's death; but we were at a loss to conjecture how life could have been supported so long as it was, under such distressing circumstances.

I will now consider dyspepsia as connected with some other diseases.– And here let me remark that in the work of Wilson Philip, we read of dyspepsia as an inflammatory disease; & a systematic description of its regular ~~changes~~ stages, changes of structure by inflammation, &c. &c. This seems to be the fashionable doctrine of the day in England. We hear of bleeding to reduce inflammation, &c. I have no objection to leeches or cups – let them be tried. But I am much more inclined to regard dyspepsia as a disease depending, generally, on the want of due nervous excitement; & the disorder of the system, a state of irri-

tation, instead of inflammation. The experiments of Baron on rabbits go to show the power of the nerves in digestion.

The first disease which I shall notice as connected with indigestion, is hepatitis. I related to you, in the early part of my observations on dyspepsia, that I believed it might occur as an idiopathic disease, while the functions of the liver are regularly performed. But the fact is well known to every practitioner that the two diseases are sometimes closely connected. When we meet with them both affecting the system at the same time, it is evident that the practitioner should direct his principal attention to that which involves the patient in the most immediate danger. Under this view of the case, the hepatic affection must be first attended to. If you should be called to a patient affected not only with the symptoms of dyspepsia, but, super-added to these, with pain & uneasiness in the region of the liver, & with pain darting to the shoulder; if, at the same time, he should be unable to lie on his left side without inducing uneasiness in the right, you may conclude that he is affected with hepatitis, & that the dyspepsia is probably sympathetic. Having ascertained the existence of inflammation of the liver, your views must now be directed to this as the primary affection. Hence, it will happen that a course of practice will be adopted, which would not be required for idiopathic dyspepsia. It sometimes happens that there is so much vascular action, that depletion becomes absolutely necessary, & even the lancet may be advantageously resorted to. But

the main remedy resorted to with a view to its general operation on the system, that can be depended on, is the judicious use of mercury. I have seen this remedy resorted to with a view to its general operation on the system, with great benefit, in hepatic dyspepsia. I recollect an instance which, within a few years, has fallen under my observation, where there was disease of the stomach accompanied with an affection of the liver, & complicated with symptoms of dropsical effusion, both in the abdomen & cellular membrane; & yet by a proper regulation of the diet with a cautious use of mercury, & afterwards by sending the patient on a journey, there was a removal of all the unpleasant symptoms, & a perfect recovery established. In a late case, that of Dr. Harlan, there was an example of hepatitis combined with dyspepsia. Many of you know that the Dr. some years ago, took a voyage to India. Soon after they set sail for home, he was attacked with the fever of India, & became ill on his passage. I am induced to believe that ever since, he has been more or less affected with hepatic disease. Lately his mind & body have both been much fatigued. He has been engaged in a course of experiments on absorption, to which he devoted several hours in the day amid the putrid effluvia, arising from dissected animals & nauseating tubs, in warm weather. The result was an attack of dyspepsia; and we soon saw that his old enemy, hepatitis, had not let go its hold on his system. There was considerable fever, & for this V.S. & a low diet were at first prescribed. But the only remedy which ultimately proved effectual was mercury.

This urged to salivation, did away the dangerous & unpleasant symptoms; & he has since enjoyed very good health. I I should spoken under the head of dyspepsia, of cardialgia or heartburn. It is a painful burning sensation, arising principally from accumulations of acid in the stomach, blended with the biliary secretion; & is to be relieved by those remedies which I have before mentioned as useful in correcting acidity.

Dyspepsia may also be connected with gout & rheumatism; which may be transferred from muscular or external parts to the stomach. If the gout or rheumatism be located in a safe part, as the extremities for instance, even though the patient should be subjected to great pain, yet you should be careful not to attempt, by local applications, to remove the disease. For by so doing you increase the risk of a far greater evil — you subject the patient to the danger of a translation of disease to the internal organs, particularly the stomach. When the patient is at all subject to translation of the disease, & complains to you of pain in some external part, content yourselves with applying cotton or carded wool, & by no means attempt to remove it by severe applications. But if you have ascertained the existence of dyspepsia from translated gout or rheumatism, you should pursue the plan of counter irritation. Endeavour by Cayenne pepper, mustard, or other stimulants to the feet, to procure a revulsion to that part. In addition, the internal remedies which prove effectual in gout & rheumatism should be employed; & one which I have found particularly advan-

tagious, is the volatile tincture of guaiacum. A tea spoonful of this may be taken 3 or 4 times a day in a wine glassful of new milk, which I have found to be the most convenient vehicle. It sheaths the acrimony of the medicine, & generally proves acceptable to the stomach.

Diseases of the Thoracic Viscera.

Phthisis Pulmonalis.

The study of this disease is most interesting to us all, in as much as so large a portion of our species annually fall victims to its violence; offering a melancholy proof that it is still to be regarded as the opprobrium medicorum, & that the practice hitherto pursued for the purpose of arresting its progress, in a large proportion of cases, is inefficient, if not injurious.

Consumption is a disease generally confined to early & middle life, though I have seen it in old age. I attended a marked case, which terminated in death, in an old lady 70 years of age: but such instances are rare. We also see the same disease in tender infancy. Many a case of pulmonary consumption in children, has passed under the name of worms.

If I were to attempt a condensed description of this disease, I should say that it is a complaint of the lungs attended

with hectic fever; that the pulmonary affection terminates at length in suppuration & purulent expectoration, and death ensues.

The disease is generally hereditary. This is a fact so thoroughly established, that I believe it is beyond all doubt. The knowledge of this fact is interesting to us when called to patients labouring under the disease. Because hereditary consumption is much more to be dreaded, than the disease accidentally induced. But though it is hereditary, yet it is a fact with which you ought to be acquainted, that it does not always pass in a direct line from one generation to the next. On the contrary; we have instances of one generation escaping, & the succeeding affected with the complaint in its full force. Thus, I am intimately acquainted with a family, some of those members are remarkable for their longevity, though their ancestor by the maternal side died of pulmonary consumption. Out of 7 children of this family, 2 attained an age considerably beyond 80; one of the 7 died of the disease; the remaining six lived to have families, and none of them died of consumption; one for a number of years laboured under bronchitis, but ultimately died in old age of hydrothorax; — this individual lost a daughter of phthisis pulmonalis. Several of the children of one of those who lived to be eighty, were affected with pulmonary consumption, & died: so that it passed over him & over 5 of his brothers & sisters, to fix on the next generation.

In some instances this is a family disease. When we are unable to discover any hereditary predisposition, & when the

patients have lived in health to an extreme old age, the children sometimes exhibit this predisposition to consumption, & every one die. Such was the family of Dr. Crane, the physician & friend of Washington.

Some writers have divided this disease into a variety of species. Now I am inclined to simplify this arrangement: at any rate, I wish to distinguish certain affections which resemble phthisis, & often pass for it, from the real disease. Thus, vomica should be distinguished from the true pulmonary consumption. Vomica may be accidentally induced, they may arise without constitutional predisposition, as from neglected pneumonia; & patients labouring under this complaint may recover. Catarrh may also arise & become very obstinate, without any constitutional predisposition in the system to pulmonary consumption. The bronchitis of old people may be confounded with pulmonary consumption: but it is a different disease. But while I draw these distinctions, I am ready to admit that catarrhal disease & pneumonic inflammation are apt to induce consumption when they act on a system possessing an acquired or hereditary predisposition to the complaint. Hence, it is important for persons having this constitutional tendency, to pursue such a prophylactic course of treatment as to place the lungs in a condition to resist the disease when it makes its attack.

Consumptive patients are very generally characterized by a peculiar form of body. Hence we often find them tall & very slender, possessing narrow chests, & not unfrequently

excellent teeth; & having their nails of a peculiarly delicate shape. Such persons are generally inclined to pulmonary consumption: but this is not invariably the case; & I have sometimes seen persons with well formed chests attacked with the disease. The persons first described often possess great sensibility of mind, & not unfrequently an unusual degree of intelligence. They are generally subject to considerable weakness of body. Slight causes are apt to affect them considerably; & chilliness with flushes of heat, or what may be called a febriculous state, may be discovered before the disease has fairly invaded the system. It is not unusual for persons of this character to complain of a sense of weakness in the breast, & to have a slight hacking cough; &, what is more to be dreaded than almost any thing else, a predisposition to hæmoptysis. Hæmoptysis may always be regarded as an evidence of a weak pulmonary system. But it by no means follows that every case of hæmoptysis should be succeeded by pulmonary consumption. When, however, we find patients affected with occasional discharges of blood from the lungs, we may lay it down as an axiom, that they are in a dangerous situation, & should be very closely watched. The description of persons mentioned, generally possess an irritable state of the blood vessels & a frequent pulse. But remember that in my lecture on the pulse, I drew a very marked distinction between a frequent pulse arising out of an actually irritable condition of the arteries, & that kind of pulse which proceeds from an inflammatory diathesis.

As the disease gains an increased ascendancy in the

system, deviations from health become more & more apparent. Patients are often very feeble, so that a little exertion fatigues them; & this weakness goes on gradually increasing, & at the same time, the body becomes emaciated. About this stage, we may often discover a circumscribed hectic blush on the cheek; & in females, that lovely & interesting part of the community, a suppression of the catamenia is an almost invariable attendant. If you examine these patients, and endeavour to ascertain the history of their cases, you will not unfrequently find, that at some period of their lives they were subject to glandular swellings about the neck. In the course of my practice, I have met with cases in which the glandular affection of the neck had induced disease of the absorbents which had become indurated, & might be traced passing down & losing themselves in the cavity of the thorax. This is an interesting fact, & one which I have had an opportunity of ascertaining by observation & confirming by dissection.

When the disease has fairly invaded the system, then, as I stated in the commencement, hectic fever becomes clearly established. Chills occur at irregular intervals; fever accompanied by flushes of heat succeeds; the circumscribed redness of the cheek is observed, & the paroxysm terminates in profuse sweats which impair the strength of the patient. At this time frequency of the pulse becomes established. You will rarely find it below 100, & very often will meet with it at 120. The last is a common standard in cases of hectic fever. In forming my judgement

of cases in which I have been consulted, I have placed very great reliance on the pulse. I have often been consulted by patients, have listened to a description of their symptoms, & knowing that cough, chill, & fever may arise from causes not much to be dreaded, I have said to myself, before placing my fingers on the pulse, every thing will depend on the condition of the artery I am about to examine. If I find the pulse 120 the case is fixed; if it be not so frequent, but merely indicates debility, how much shall I be rejoiced!

I shall not detain you long with a description of the latter stages of pulmonary consumption. It is sufficient to say, when hectic fever commences, & the patient has a cough with purulent expectoration, the emaciation increases, great debility ensues, the night sweats become profuse, alternated with diarrhoea, swelling of the legs appears, & death puts a period to the sufferings of the patient.

It may not be improper for me to mention, that in the latter stage of phthisis, the patient becomes extremely weak, has copious purulent expectoration, & the physician justly considers that life depends on a continuance of the cough. If this cease expectoration will not take place, & suffocation must be the necessary consequence. This is really the case, & some of the most agonizing instances are those when the patient wishes to expectorate without having the power, & for a long time is approaching towards death, without being able to die. I have known this state of things to continue for days. In some cases the cough will leave the patient, & yet he will not die of suffocation. In these instances diarrhoea will sometimes ensue.

This will continue for days & even weeks, before the little remnant of vitality is destroyed. Another symptom of the last stage is occasionally met with, which is rare & well worthy of notice. I have seen three instances in which real mania accompanied pulmonary consumption: all the patients were females. The maniacal symptoms were violent; but they lasted only a few days, before death took place. The disease, however, is in general marked by great clearness of intellect, which continues till the latest period of existence.

If you examine the lungs of patients who have died of this disease, you will be presented with appearances which easily explain the cause of its mortality. Patients labouring under genuine phthisis pulmonalis, so far as my experience has gone, are almost invariably affected with tubercles in the lungs. Sometimes these tubercles are diffused through both lungs; at other times they are pretty much confined to one. If you make an incision into the lungs, you will open into a number of small abscesses; you will find an aggregated mass of disease, consisting of tubercles in two states, & of abscesses containing pus. Some of the tubercles are small & indurated; others are larger, & if cut into are found to contain a soft cheesy matter. This state of the lungs at once goes to show the difficulty of effecting a cure, after the touch of the disease has been fairly lighted up. For, admitting that you could cure the abscess already formed, you have thousands of tubercles ready to pass into the same condition.

Having now given a general description of the complaint, & of the appearances after death, I will commence some general observations on the practice which is commonly pursued

in the treatment, I regret I cannot in the cure, of pulmonary consumption. It is not long since, in the University of Pennsylvania, there was an illustration of a practice in this disease, founded on the opinion that it is of an inflammatory character, & that it requires a strict antiphlogistic plan of treatment for its cure. With this view of the subject, you can easily understand that a variety of remedies, calculated to lessen arterial force, were resorted to. Among these the lancet stood conspicuous; & in connexion with this, mercury was employed with very great liberality. I well recollect, in passing through the wards of our Hospital, when that great & distinguished physician, Dr. Rush, was at the head of the clinical department, that this plan was most strictly pursued. But so far as my recollection goes, it was attended with little or no benefit to the patients, & was generally more injurious than useful. In addition to this, a most rigid system of dieting was considered necessary; & close confinement in a warm room formed part of the practice. One ward was fitted up with stoves for the purpose of keeping the patients in an artificially warm climate through the winter season. This practice was not only common in the Hospital, but was also fashionable in the private practice of the city.

Besides bleeding & mercury, other remedies were proposed & adopted. Thus the acetate of lead was used under the impression that it would reduce the frequency of the pulse, & improve the general condition of the patient.

We were instructed in that day to believe that the disease had an inflammatory & a typhoid stage; & that when the

inflammatory condition was relieved by the vigorous use of depleting remedies, it passed into one of a typhoid nature; & that then we were to fill up the bloodvessels by the use of porter & beef steaks, & quiet irritation by opiates.

This constitutes a general outline of the plan taught by Professor Rush. Other practitioners who were less attached to the mercurial treatment, & less disposed to carry the lancet to so considerable an extent, resorted to another practice. Thus, Professor Barton also a physician to the Hospital, was much attached to the use of emetics; he also placed great confidence in Mosely's vitriolic solution; & he used Fowler's solution with the utmost liberality.

Again, my beloved & respected preceptor, Dr. Wistar, was almost enthusiastically attached to the use of digitalis; & he had one patient while I was a student, who really appeared to recover under the long & dilligent employment of this article.

With these three different modes of practice milder remedies were occasionally introduced by all; as palliatives to allay cough, blisters about the chest, &c. But under these various modes, the poor patients generally went one course — the disease bade defiance to treatment & terminated in death.

When I commenced practice, I was much inclined to pursue the plan advocated by Dr. Rush. The happy manner he possessed of impressing his principles on the minds of those who attended his lectures, & the ingenuity & force with which he illustrated these principles, were apt to captivate the mind. I commenced practice so fond a convert to his opinions as to be disposed to test them by

a fair trial. But in the course of a few years, experience, that best of teachers, convinced me of the necessity of a change. Indeed, I saw in consultation with Drs. Rush & Physick, one very striking example of the inefficacy of this plan of treating the disease. The patient was a truly amiable & interesting young man who was not more than 24 years of age. He was the oldest son of an affectionate & anxious father who had lost his wife with pulmonary consumption. When the son was attacked, the father became immediately alarmed. His previous experience enabled him to recognize in the son, the symptoms which with sorrow he had seen in the mother, & he was easily disposed to avail himself of medical advice. The young man was brought from his father's residence in the country to this city, & arrangements were made for his spending the winter in a warm climate artificially induced. He was placed in a very spacious apartment, in which was a soapstone stove. A thermometer was suspended in the room, & a uniform heat was maintained by day & by night. One of the first nurses in the city was selected to carry our directions into effect; & in fact everything that a parent having the command of great wealth could bestow, was at our disposal. We had no excuse to plead. The patient submitted to every direction, & all our orders were faithfully obeyed. The treatment was commenced by a system of very close dieting, with small & frequent bleedings, & the use of mercury. After pursuing this plan for some time, & finding that the mercury given by the mouth failed in affecting the system, we resorted to its external use. A taylor was sent for to take his measure for a pair of flannel pan-

taloons, to be made with feet to them. When prepared, they were spread on the inside with mercurial ointment, & drawn on the patient. In this situation he remained some days: but alas! instead of arresting the disease & allaying irritation, the system became weakened, & ptyalism could not be induced. Under these circumstances we resolved on a change. Mercury was laid aside, & we attempted the sweating plan. Sulphur was also given, together with tar-water, which Dr. Physick thought he had seen useful in similar cases. But no benefit resulted. The father who watched with solicitude the progress of the case, one day, in great distress, inquired whether Dr. Rush might be called in consultation. This was readily consented to. There was now three of us in daily attendance. I being the youngest, saw him twice a day, & my colleagues every morning. The acetate of lead was now given – 2 grs every 2 hours. This was continued for several days. It did, it is true, diminish the frequency of the pulse; brought on symptoms of colic, & was abandoned. Issues were applied to the thorax; & at last we got to a period, when it was thought that the typhoid stage was so far developed, that it was proper to commence a plan to fill up the blood vessels. Tonics of various kinds, the weaker & the stronger, were used in succession; but suffice it to say, all our efforts were unavailing. The treatment was begun in the early part of winter, & in the spring our patient died.

Next door, or next but one, resided a student of medicine, (afterwards Dr. Samuel Hopkins of New Jersey). In the preceding summer Hopkins had been attacked with hæmoptysis. At that

time he was a student in the Pennsylvania Hospital. He was under the care of Dr. Rush, & a system of vigorous depletion was pursued. The hæmoptysis passed away, but he was left in considerable debility. He went into the country, & returned in the fall; but his health did not permit him to resume his studies in the Hospital. At the commencement of the winter any person, on observing the two patients, would have supposed that Hopkins was farther advanced in the disease, more reduced, & more likely to pass away than Smith, (which was the name of the one who died.) Hopkins was pallid, emaciated, & had cough & fever. As he was situated so near to medical aid, three physicians attending daily in the neighbourhood, his friends requested him to have the advice of some of the physicians of the city; but this he steadily refused. His uncle with whom he lived, one day candidly told me, that his nephew refused, because he believed that the practice which would be pursued would only tend to hasten a fatal issue to the disease. The winter passed with nothing but a mild palliative treatment; as paregoric to allay cough, &c. Spring opened, & it found Hopkins a living man; but poor Smith had been carried to his grave.

Let us now trace the course of the disease in Hopkins, & mark its termination. He went to Woodbury; his father purchased him a horse, & he commenced the life of a country doctor. Strange as it may appear, he rode himself into a state of very good health. He had an extensive practice; he married & became the father of several children. He after-

terwards removed to this city, & fell a victim to typhus fever, which he contracted during his ~~business~~ attendance on the practice of the Dispensary. This happened 10 or 12 years after the winter of which I have spoken.

I often conversed with this gentleman on his case, & he assured me that when he first commenced practice in Woodbury, he found nothing so effectual in relieving his distressing chilliness, as riding on horse-back. He said, he often sat by a large fire, with the back of his chair covered with a thick coat or blanket, without being able to keep himself warm. While in this situation he would, perhaps, receive a call from a patient, acquiring him to mount his horse. He would do so; &, as he rode, would feel better. After going a few miles, the exercise would produce such an excitement in his system, as to overcome this chilliness; &, as I have told you, he rode himself into sound health.

These two young men lived contiguous to one another. One who had all that affection & wealth could offer; who was attended by two of the best & most distinguished physicians in the city; who was kept in an artificially warm climate; & who had the careful attendance of one of our first nurses, died. Hopkins, who refused all this aid, depended on simple, domestic remedies: thus passed the winter; spring opened; he commenced the life of a country doctor, & recovered.

These cases had a strong tendency to produce a change in my opinions, which subsequent experience has confirmed.

& I propose, before leaving the subject, to furnish another case in support of it. I shall then give the views which my experience & observation have afforded me, as to the best mode of managing the disease.

I shall now proceed to give some account of cases of this disease which have been suspended or cured, by quiet exertion on the part of the patient. The first that I shall mention is that of Dr. Baldwin. He was a graduate of this university, & a man of science - an excellent botanist in particular. He belonged to a consumptive family; his father & five brothers had fallen victims to the disease. He settled in Wilmington, (Delaware,) where the disease commenced. He was fully aware of its nature; & calculated on the fatal consequences which would soon result, unless some measures were employed to avert them. He determined on a change of climate. Home, in the winter season, he embarked for Savannah, bearing with him letters of introduction to persons of the first respectability in that place. This was at least 5 or 6 years before his death. At the time of his embarkation, his health was much impaired. On his arrival at Savannah, as he afterward informed me, he made up his mind to travel on foot to Milledgville, the capital of Georgia, which was distant upwards of 100 miles. His friends considered him little short of a maniac. Disregarding their sentiments, however, he took from his trunk some necessary articles of clothing, tied them up in a pocket handkerchief, ran a stick thro' the bundle, & placing it on his shoulder, trudged off through the

streets of Savannah, on his way to Milledgville. On his route he endured considerable privations, – lodging in cabins, among people as untutored as the wild men of the wilderness; & partaking of their homely fare of ham & corn bread. Sometimes he waded streams; but finally arrived without any material accident, at the capital of Georgia. There he met with Col. Hawkins, the agent of the United States among the Southern Indians. This gentleman treated him with great attention, & invited him to attend him to his residence. He did so, & passed the winter there. In the spring or summer, he found his health nearly restored. On his return to St. Mary's from the United States agency, he learned that the naval surgeon on that station had died. At the request of some persons, he agreed to supply the vacant place, till they could hear from Washington; and soon after a commission, appointing him naval surgeon, was received from that place. He accepted it, settled in the country, & remained several years free from disease. Not long since, he left that station, & engaging in the capacity of botanist to the Yellow Stone expedition, he died on the journey. – I have no doubt that his disease was suspended several years, by the course of life he pursued.

During my attendance in the Philadelphia Dispensary, I was occasionally struck with some patients, particularly one black man who was under the necessity, either of using great exertion to obtain a livelihood, or of becoming a tenant of the Alms-House. The very great dislike which prevails among many of the poor to being received into this Institution, operates as a powerful incen-

tive to exertion. I remarked that some patients thus situated, continued longer & bore the disease better than others whose circumstances were considered much more comfortable. There was one case different from these in which I felt a particular interest, & in which the efficacy of exertion in prolonging the disease, was very evident. This was the case of Benedict D. Potts, a young physician who had pursued his studies with me; & a man whose amiable qualities & intrinsic worth were not generally known. Poor Potts was attacked by a sad precursor of pulmonary consumption: I allude to fistula in ano. The fistula was small, & I operated on him in my office. Though small, however, yet it was very much indisposed to heal; & a long time elapsed before it did heal. Unhappily, soon afterwards he was attacked by hemoptysis, and symptoms of consumption became manifest. He lived at least one year longer than he would have done, if he had not been prompted to exertion by the stimulus of necessity. He depended on his practice for a livelihood; & I was surprised to see him one day in his chamber throwing up blood, & in a few days again, running about among his patients. In this way he protracted for a considerable time the issue of the complaint.

A fine healthy looking practitioner from New England brought a letter of introduction to me some years ago. I received this account from him :- In early life he was afflicted with pulmonary consumption; & while labouring under this disease he commenced the life of a country doctor. It so happened, that in the first season after he began practice, there was an unusual degree of sickness. He was consequently under the

necessity of making a great deal of exertion, & the result was a restoration of his health. In the course of conversation he told me, (I copy his words,) "I have left a patient labouring under pulmonary consumption with directions to ride 10 miles every day, let the weather be what it might." This was in the winter.

A respectable man in this city, Jos. Riley, a carver by trade, soon after his marriage was affected with cough & hectic fever, & came under my care. I felt great solicitude in the case, & determined to try the efficacy of horse-back exercise. I advised him to ride daily. He followed this plan through the winter, & in the spring was evidently improved. The summer opened on him, & in the course of it the camp of Dupont was formed. It was during the late war. This young man became one of the volunteers, & went down with the rest. He was subjected to all the hardships of a camp life; his health & strength increased, & he is now a hearty man, free from all symptoms of pulmonary consumption.

A very remarkable case of this kind occurred in the family of a friend of mine in this city. A little son laboured under cough, hectic fever, profuse sweats, & great emaciation. I watched the case with a good deal of anxiety, & found it a difficult matter to carry my views into effect. The solicitude of the friends of the child, who visited the family, & who were constantly recommending one thing or other, had considerable influence on the minds of the parents. To have a child so sick, without any active practice being adopted, seemed to be incompatible with the views of the visitors. Mercury was proposed; but hop-

pily the parents listened to the suggestions of the physician. No active practice was employed. As soon as Spring opened, he was sent into the country, & his father was directed to give him all the benefit of air & exercise. He returned from pulmonary complaint, has since had hooping cough, & now enjoys excellent health.

I shall close these cases by giving one more illustration which to me was peculiarly striking. Shortly before the death of Dr. Wistar, an interesting young lady was brought from Jersey to consult him for chill, fever, pain in the ~~head~~ breast, hacking cough, & considerable loss of voice. All these symptoms were very gloomy precursors. Dr. Wistar being absent on a journey when the lady arrived, she came under my care, & I paid her a few visits before he returned. We entered very fully into her case. After seeing our patient, the Doctor, who had just felt the advantages of travelling over the mountains & who took great delight in this kind of exercise, looked round the room & made use of these words: "Doctor, dont you think it looks confined & close here? Dont you think it would be best to send her back to the country, & direct her to ride every day?" I concurred heartily in the proposition. We first put a seaton in her side, & then advised her to return home & use exercise. The winter passed over. The following summer she visited Philadelphia, greatly improved in health. I have since repeatedly inquired of her situation, & I was lately pleased to hear that her health had been completely restored.

About the same time I attended, in consultation with

a practitioner of the first respectability in this city, a young woman who was attacked with hæmoptysis, & laboured under hectic fever & cough. Now mark the history of this case. Here it was suggested that there was an inflammatory state of the system, & that the best way to subdue it was by depletion, by a rigid antiphlogistic regimen, & by keeping the patient at perfect rest. Rest was considered as a point of peculiar importance. The plan was put into operation. This was in the beginning of fall; & a course very similar to that of young Smith was adopted. Mercury & acetate of lead were tried; a variety of plans were resorted to; but suffice it to say, the patient died in a few months.

The following history of a case was drawn up by a gentleman of Ohio, & handed to me by his son Dr. Gillman:

"In the year 1804, Thadeus M. Harris, a clergyman of Massachusetts, called at my house in Marietta; & from him I received the following account: He had left Dorchester, Mass. that Spring, so very low in consumption that neither he nor any of his friends had any idea he would be able to reach Hartford, Conn. distant 100 miles. He arrived there however, & though still very weak, he concluded to prosecute his journey to New York. When there, finding that he was gaining strength, he was encouraged to proceed to the western country. On his arrival at Marietta he was so well as to be able to ride 40 miles a day, to preach; & was, in fact, quite recovered. He returned to his parish in Dorchester in good health; & two years ago I heard he was still well."

"Marietta 1823."

My friend, Dr. Emler, presented me with the following extract from "A Manual of the Climate & Diseases of Tropical Countries, &c. By Colin Chisholm, M.D. F.R.S. &c. &c." Published in 1822. London.

(Dr. Chisholm is an old practitioner retired.)

On the subject of consumption, he says, "An active, bustling occupation of time, with exposure to what may be called, & deemed hardships: such as often occur in military service, during an active campaign, or in maritime service of any kind, have sometimes produced a most wonderful change in a constitution broken down by phthisis. I have known instances of officers, in both services, recover their health by seemingly inconsistent means. One thing is most certain, that confinement to the atmosphere of a room, or even house, is most highly prejudicial; it renders the person infinitely more susceptible of cold, & thereby tends to augment the evil which it is supposed calculated to remedy."

In opposition to these views, you will hear it strongly argued by men of talents & large experience, that this is certainly an inflammatory disease. Why then should you subject your patient to a course of practice which must certainly increase inflammatory action? Why do you direct him to ride over hill & dale, & be jolted on horseback, when his system is in an inflammatory condition? This is opposite to all theory. But it should be remembered, the lungs, the seat of the disease, the very fountain of danger, cannot be put at rest. The reason would apply strongly to an inflamed joint: I admit this fully.

But it should ever be borne in mind, that from the moment we begin to breathe, to the latest period of our existence, the lungs are never at rest. Hence, whatever reasons we may give for the necessity of rest in inflamed joints & muscles which may be kept from motion, must fail entirely when applied to the lungs.

In hectic fever, is there not a preternatural irritability of the system? It is admitted by every one that this is the fact. Let me ask again, do not depletion, low diet, & close confinement, increase the irritability of the system. I advance it as a fact, which I believe experience will substantiate, that if you take a robust man, put him in a close room, bleed him repeatedly, diet him strictly, keep up action on his bowels by purgative medicine, & allow not a breath of fresh air to blow upon him, his pulse will become frequent & irritable, he will be affected with night sweats; & I should not wonder if his blood should become sizzy. If such would be the effect on a man in full health, with how much greater force will the reasoning apply to a man already debilitated by disease? I can speak from observation, that such a pulse will be reduced by a contrary plan of treatment. I recollect one case of pulmonary consumption, in which, for some time, a rigid antiphlogistic diet was pursued, & the pulse in consequence became very frequent and irritable. The patient insisted on a change in his diet; & as soon as he began to live more highly, his pulse became slower & fuller.

It not unfrequently happens that the practitioner is called to see patients in the last stage, when no medical treatment

had been resorted to. From such cases he may sometimes draw important practical rules. Now, I firmly believe in the doctrine of the vis medicatrix naturæ – as to the name, I care nothing about that; but for the principle I do contend, & I consider it of very great importance. It is true, that blood, bone, & muscle are not endowed with mental intelligence: but though this is the fact, I believe there is an innate principle in the system, whose object is to preserve it from the dangers that surround it, & to repair the dangers to which it is subject. We have heard it said that life is a forced state; as if the action of surrounding agents was continually necessary to keep it from dissolution; as if it could only be maintained by the utmost efforts of these agents. But if it be presumed that life is a forced state, it must be allowed that these agents can do no more than keep it in the state in which they found it. They certainly cannot repair the injuries to which the body is subjected. Let a large wound, or a loss of substance, take place in the human subject; is this wound to remain in the same situation? No: the system at once sets about repairing the damage – granulations sprout up, & pus, the purest & best of balsams, is secreted to defend them. In the progress of the cure, the granulations rise to the surface, new skin is formed, & the restorative process is completed. It will do well enough for a theoretical physician to consider life as a forced state: but the practical surgeon will inform him, that the language of the system is entirely opposed to such a hypothesis. Admitting then that there is an inherent power in the system to repair damage, & partially to prevent disease, we

may go further & draw a simile not altogether irrelevant to the subject before us. Suppose an intelligent being arrested by the hand of violence; suppose him confined & deprived of all his natural privileges: now mark the expedients such a man will resort to, to extricate himself from his difficulties. Look at Sir Sidney Smith in the prisons of Paris. Immured as he was, he happily caught, through the window of his cell, a female eye which viewed him with compassion. A regular correspondence was carried on by signs; so regular and so systematically arranged, that even bills were drawn on his friends in England, funds were procured, the vigilance of the most active police eluded, & the prisoner restored to his natural privileges. Apply this to the human system under the influence of disease. I trust I shall be able to prove, before I finish the subject of pulmonary consumption, that there is, in the human system, in some cases, a strong tendency to effect a natural cure, & that this natural cure does sometimes take place. The system feeling itself invaded, & its natural privileges taken away, sets about relieving itself from its difficulties.

I began by telling you, that, in a large proportion of cases, pulmonary consumption is nothing more nor less than internal scrofula. I will now tell you, that this internal disease has been removed by the production of an external disease of the same character. I shall also attempt to show, that the external disease being repelled, or driven back into the system, is capable of producing an internal disease

which will prove fatal. This doctrine of metasis as applied to scrofula & pulmonary consumption, is a very interesting one. In order to illustrate the position, that external scrofula will cure the internal disease, I refer you to the case of Hetty Kellen (See Eclectic Repository, vol. 2. p. 201.) In addition to this I have been consulted, in the course of my practice, by several patients labouring under pulmonary disease which has been relieved by external scrofula. A delicate looking young man was brought to me from New Jersey. He had been subject to cough, & had laboured under symptoms of pulmonary consumption which had been relieved by the occurrence of an abscess in his side. I had good reason to believe that this abscess was connected with the lungs. Efforts had been made to cure it; but happily, they had failed. I had no doubt that the preservation of his life depended on his keeping up this discharge. I gave advise accordingly. The case of a young woman, in similar circumstances, afterwards came under my notice; & I gave similar advise. In both, life & health depended, most probably, on the continuance of this external discharge.

In the Eclectic Repository you will find several instances related, when, on the disappearance of the external disease, the internal came on & destroyed the patient. These facts have brought me to the conclusion, that scrofula is a disease capable of being translated from the external to the internal & vital parts, & vice versa. The doctrine of metastasis in some diseases is perfectly familiar to every prac-

titioner. When regular gout, for example, invades an external part, as the foot, where is the judicious practitioner who, for one moment, would suppose it proper to apply repellants to the affected extremity? Why would this plan be injurious? Because the gout which in the foot is harmless, by retrocedding, may attack some vital part, & destroy life. When gout affects vital parts, our object is as soon as possible to invite it to some safe situation, & the place selected is generally the foot. Scrofula is subject to precisely the same laws. The only difference is, that the time required for the production of the same effect is longer. In gout the change is sudden; in scrofula it is slow, but certain. The practical inference to be drawn from these facts is obvious to you all. External scrofula is, in many instances, a painful disease; & is very apt to occasion deformity, which, among females especially, renders it hard to be borne, as it generally takes hold of the glands about the neck. The practitioner is frequently solicited by his patients to use repellent remedies with the view of preventing this deformity, & in some instances, he may succeed. But in the early part of the lectures on this subject, I called your attention to the fact, that in these cases of scrofulous swellings, in most instances a chain of diseased absorbents could be traced passing down the neck, & losing themselves about the clavicle. By dissection I have ascertained that they pass into the lungs. Now, exactly in proportion as repellent remedies drive away the external disease, so do they increase

the danger of pulmonary affection. Hence in subjects constitutionally predisposed to phthisis, I would urge you to be particularly careful to avoid measures calculated to produce the effects I have mentioned. Much rather should you allow the scrofula to follow its natural course; much rather should you promote suppuration, than procure discussion; & this rule applies with peculiar force to young people, especially young females about the period of the appearance of the catamenia.

But here you might naturally observe, "we have been enabled thus far to acquire some general views; but is there any systematic plan of treatment, is there any mode of prevention which, we all know, is better than cure? May not some prophylactic plan be adopted with advantage?" This is a very interesting part of the subject; because if we can observe the first approach of the enemy, or before his appearance ascertain the avenues through which he is likely to pass, we shall be more successful in preventing his inroads, & in resisting his attacks. I shall endeavour to lay down a few observations on this subject.

It is important in pursuing a prophylactic plan to commence early; & I believe that parents often fall into a fatal error, arising out of an ill-directed tenderness. It is common for parents, in selecting a situation for a weakly child, to direct his attention to some employment which subjects him to as little exertion as possible. Hence an error is committed at the very threshold. Instead of choosing such a trade

as that of a watch-maker, tailor, &c. It be much better to place the child under the direction of a farmer, where he may have the full advantage of air & exercise; & if not a farmer, there should be selected for him some other active out-door employment, as that of a brick-layer, or a carpenter. I have long been convinced that fresh air & exercise are necessary for the preservation of health, in persons predisposed to phthisis. In addition to these, we are next to adopt measures calculated to give tone & vigour to the pulmonary system. I have seen cases in which there was a predisposition to pulmonary disease of a fatal character, & where I had an opportunity to pursue a prophylactic treatment from early infancy. I directed, with this view, the inhalation of the fumes of rosin & tar. I founded this practice on a fact mentioned to me by a respectable merchant of New England, who had been much engaged in ship-building. He told me that he had rarely or never seen a caulker die of pulmonary consumption. A respectable physician of New Jersey, whose practice is extensive, on being asked whether consumption was so common among the pines as in other parts, answered, that so far as he recollected, it was not so common. This is another fact which tends to strengthen my belief in the propriety of using fumes of rosin & tar as a preventive.

I have cautioned you most scrupulously to avoid meddling with scrofulous tumours situated externally. It now remains for me to state, that when the disease invades the system, the facts previously noticed ought to be borne in mind. The

efforts of the system to relieve itself should be constantly in the eye of the practitioner. This observation naturally leads to some curative plans when the complaint has seized on the lungs. What are these curative plans? What was the language of nature in the case of Hetty Miller, to which I have referred you? Scrofulous swellings took place in the axilla: nature pointed out this as a situation for the external disease, with the view of arresting that within. Recollect that a common seat of external scrofula is in the neck. When, therefore, the lungs are affected, you should endeavour to excite this external disease. How is this to be accomplished? It is true, that by blisters seatons, &c. a great deal of good may be done in some of these cases: but we may extend our practice further. I will relate to you some instances which fell under my care.

In the summer of 1813, in the family of W. I. Miller, a respectable merchant then residing in this city, I was called to attend a black child, the son of one of the servants. It seemed to be a great favourite with its master & mistress, & considerable interest was felt in the case. But on visiting it, I found it far advanced in consumption, or internal scrofula. The child soon died. In progress of time the parents, who still remained in the family, had another child, & this infant was attacked with the same disease, accompanied with the same symptoms as in the other case. The parents became alarmed, & the child was placed under my care. It was affected with hectic fever and cough, & was in the early stage of internal scrofula. I explained to W. Miller & his wife the views I had taken of the dis-

case, & my reasons for the mode of practice I was about to institute. They entered heartily into my opinions, & the practice was carried into effect. It was this: The child had never been vaccinated, & I commenced the treatment as follows: With a sharp lancet I made a number of superficial incissions through the skin, commencing behind the ear, & carrying them down the neck in the course of the glands which are usually affected in scrofula. Having done this, I introduced the vaccine virus into the incissions through their whole course. At the regular period of time, when the pustules were at their height, I directed that the child should be brought to me. When I saw him again, I was pleased to find very extensive vesicles, accompanied by much tumefaction in the surrounding parts. This was the moment for perpetuating the plan I had commenced. Instead of allowing the pustules to take their regular course – to form a scab & pass away, I began a very rough treatment with them: I scarified them with a lancet, & took care to supply them well with stimulating ointment. My object was to keep them sore as long as possible. Directions to this effect were given to the master & the parents; & happily for the child, they were carried into operation. Weeks & even months passed away without our allowing the parts behind the ears to heal. We were all pleased to see a gradual amendment in the child. I examined it with great solicitude at various intervals. Scrofulous tumours appeared in the neck, & the child was at length relieved of all its dangerous symptoms. I and

happy to add that he is still living, & I believe remains free from pulmonary disease.

I tried the same thing in the family of the Morgans, in this city, one of whose children I had previously subjected to dissection. The child in this instance, was extremely delicate, and the remedy failed. These are the only cases in which I have tried the plan. I cannot, therefore, say much from my own experience; but from what I have seen, I should certainly recommend the practice to your consideration.

In addition to this, it is proper for me to speak, in strong terms, in favour of exercise on horse-back. Horse-back exercise, or the motion of a rough carriage, I can strongly recommend to patients who have any predisposition to the disease, or who labour under it in its early stages. It is, I believe, a most dangerous error, & one which has gained pretty universal ascendency among us, to commence the early treatment of pulmonary consumption with a system of medicine and confinement. It is a very common thing for persons to say to weakly young people, "Ah! take care of that cough; nurse yourself, or you will have to repent." So far from nursing themselves, it would be much better, if they could forget that they had any cough at all. Instead of confining themselves to a close room, & thus increasing the irritability of the system & hastening the approach of a disease they have so much reason to dread, it is much safer for them to use exercise & to expose themselves to the fresh air. I myself possess a constitutional predisposition to pulmonary con-

sumption. I have lost a brother & sister with the complaint, & others have been threatened. There was a time when many of my friends & fellow citizens believed I was not long for this world: but hitherto I have escaped; & I attribute my safety, in a great measure, under Providence, to exercise. In my practice, I always use a rough chair, & have never allowed myself the luxury of an easy gig. This plan I have followed for years, & I have much reason to be pleased with it. To some patients exercise on foot is very suitable.

There were two physicians in this city, Drs. Gallaher and Davis, both of whom experienced the benefit of exercise. Dr. Gallaher was strongly predisposed to phthisis, & had lost several of his family with the disease. He made several journeys, & said he experienced considerable advantage. Dr. Davis travelled a good deal, & with benefit. He assured me that nothing relieved him so much as exercise in the fresh air. If he was confined for a day, in consequence of bad weather, he always felt worse. They both ultimately died of consumption.

A gentleman whose father died of this disease, applied to me on his own account. I advised him to saw wood for exercise. He did so through the winter. He generally sawed in his parlour. He passed well through the winter, & now enjoys pretty good health.

Flannel next the skin is an excellent auxiliary to exercise. It has a tendency to protect the system against the sudden variations of temperature to which our climate is liable. Yet if the patient is weakened by perspiration in consequence

of the flannel, I should be much inclined to adopt the opinion of Armstrong, that it should be taken off at night.

Another article may be used with great advantage, especially by female patients whose breasts & arms are more exposed than ours. I have often urged them to wear the dressed rabbit skin, as it is prepared by the furriers. It is called the bosom friend, & should be worn next the skin.

But while I urge the necessity of air & exercise, & along with these am friendly to a change of climate in the winter season, I wish to be distinctly understood, that a change of climate serves no other purpose, than to place the patient in such a situation as to enable him to take plenty of air and regular exercise. Here I would interpose a caution. Most of us have missed in practice, by allowing our patients to take long voyages, when there was no reasonable prospect of advantage. I have now made up my mind, that when a patient in the advanced stage of consumption, applies to me for assistance, I will never recommend a change of climate. It is certainly better to die at home, than in a land of strangers. The last patient of mine who removed, I did not advise to go, but I did not discourage the voyage. It would have been better had I done so; for soon after his departure I heard of his death. If benefit is to result from such a change, it must be in the early stage. Benefit does sometimes result from long sea-voyages. The case of my own brother is strongly corroborative of this assertion. Dr. Wistar & myself attended him through the winter with

cough & hectic fever. We treated him on the principle that he was labouring under an inflammatory disease. He grew worse. Aware of this, he determined to go to sea & try what would be the effect of a thorough change of climate. He obtained the situation of supercargo to India, & performed all the duties of a person in full health. He returned wonderfully improved. After this he went two other voyages, & the disease during all this time was kept at bay. After the third voyage the embargo took place, & prevented a fourth for which he was preparing. The disease now soon gained the ascendency, & he passed away.

With respect to diet, it is difficult to lay down any positive rules. This much, however, may be said, that food nutritious & of easy digestion is borne much better, than *a priori*, we should imagine. We should generally allow the feelings of the patient to be our guide. If he is distressed by animal food, his fever increased, & his cough exasperated, the patient & the physician will both think it best that he should abstain from it. But if he find his feelings more comfortable after a meal of animal food, without any increase of fever or cough, I should not be afraid to allow it. I have been much struck with the manner in which consumptive patients bear strong food. Dr. Potts assured me, even after he had abandoned all hope of a recovery, that one of the greatest sources of earthly enjoyment to him, was to sit down & take a meal of that kind of food to which he had been accustomed when in health.

He assured me that he felt better after such a meal.

In the treatment of pulmonary consumption, we are sometimes arrested by a symptom demanding a change of plan; I allude to spitting of blood. When this occurs, it must be obvious, that for a time, our mode of practice must be changed. It is generally necessary to take blood from the arm; & sometimes this must be repeated again & again. The patient should be placed in a cool room, salt should be given, & those remedies adopted which are suitable to a case of hæmoptysis. But I have myself sometimes missed it by pursuing this treatment too far. It is proper for a few days, to keep the patient at perfect rest, abstain from conversation, & use no strong food. But in a short time, the disposition goes away, & the patient may resume the plan on which alone he can properly found any ultimate hope of health. In some patients, even while the plan of air & exercise is going on, if there should be much pain or uneasiness in the chest, it may sometimes be proper to take blood. Venesection will occasionally relieve congestion & procure relief. But beware how you treat the complaint as an inflammatory affection.

There is a fact connected with pulmonary consumption, which you will do well to attend to. Every practitioner is aware that there is a striking connexion between phthisis & fistula in ano. One of the last cases of this kind that came under my care was that of Edward Coxe, Esq.

a very useful citizen of this place. I operated on him for fistula in ana. It was not extensive: but long before it healed, pulmonary consumption invaded the system, & he fell a victim to it. This connexion between phthisis and fistula in ano, has suggested that the disease of the lungs might be translated to the rectum. I once attempted to concentrate the disease in the neighbourhood of the rectum, & with this view, directed small doses of aloes. Hemorrhoidal disease was produced; but I did not succeed in curing the patient. The idea, however, I hold out to you for future consideration.

Before I bring my account of consumption to a close I will enumerate another interesting fact. This, however, is a subject of extreme delicacy. As medical students, you must be aware that it is important for you to be apprized of many sexual diseases appertaining to females, which it would be improper that others, not belonging to the profession, should be acquainted with. You should never make the diseases of females the subject of conversation, particularly before men not of the medical profession. It is a fact well understood by medical men, that pulmonary consumption is wonderfully suspended during pregnancy. This is no longer a matter of doubt. Many instances have occurred, in which the disease has been kept completely at bay by the ascendency of uterine action. In the course of my practice, I have observed that pregnancy not only suspends, but in some instances, effects a cure, particularly when the patient

is young. In a family very subject to the disease, I was called to a young married woman who was labouring under it in the early stage. Soon after the symptoms of phthisis occurred, happily for her, she was in a situation which rendered her likely to become a mother. The symptoms of the disease disappeared, & she passed regularly the period of gestation. She has since borne several children, & hitherto the disease has been kept off. I have no doubt that she would longe since have been numbered with the dead, had she not become a mother.

I have another fact to communicate. In consumption the catamenia are almost invariable absent; & while I have urged the necessity of air & exercise, I have also kept an eye on the uterine system, & endeavoured to promote its healthy action. Emmenagogues & tonics are the remedies I ~~employ~~ for the purpose. To a lady affected with the disease, I ~~prescribed~~ pills made after the following recipe:

℞. Pulv. G. Myrrh
Sulph. Ferri calc. āā ʒij
Potas. Bicarb.
Sapon. Venet. āā ℥ß
Aqua q.s. ut fiant pill. XL.

Two of these pills were taken two or three times a day, & were persisted in for a considerable time. They brought about the regular action of the uterus. — In another case I used

℞. Sulph. Ferri. Calc. ʒj
Aloe Socot. gr XV
Ferr. Ven. q.s. ut fiant pill. XXX.

The dose was from two to four pills morning & evening.

Among the medicines used in consumption, I have found tonics particularly important. Patients affected with chills, flushes of heat, & occasional sweats, will be much benefitted by a judicious use of tonics. Bark would be useful ~~has~~ were it not for its effect in producing ~~stricture~~ of the breast. Other tonics, however, as gentian, quassia, &c. may be used. The prunus Virginianus I have employed extensively. Fowlers solution is sometimes useful in arresting the symptoms of hectic fever. Pectorals & opiates, in some cases, are indispensable; but if the patient can do without them, it would be better.

Peripneumonia Notha.

I now come to the description of a disease ~~as~~ rapid in its progress, & truly formidable in its nature; I allude to peripneumonia notha or bastard pleurisy. This is in fact a serous apoplexy of the lungs. So far as my experience has gone, it is peculiar to elderly persons who have been previously diseased. It may occur occasionally among drunkards in earlier life. I know no better method of giving you a correct view of this disease, than by describing some cases which I have had an opportunity of attending:

Case of John Thompson.— John Thompson a respectable old gentleman of this city, after having lived beyond his 70th

year, met with a most severe affliction — he lost his eldest, & one of the best of sons. Soon after this event, it was evident that it had made a most powerful impression on the father. He was a man of strong mind, & acute feelings; & possessing great firmness of character, he suppressed his emotions. The consequence was, that they preyed on his health; & it was soon observed that his system was failing. He began, in common language, to break; & truly he broke very fast. He lost his former healthy aspect; his countenance became pallid; his flesh fell away, & he was reduced to a state of great emaciation. The first time I attended him with this disease, was one night about 11 o'clock. When I arrived at his house, I found him labouring under the most distressing dyspnœa; & it seemed from the panting respiration, as if every gasp might be his last. Along with this there was an almost incessant coughing, & frothy expectoration. He appeared in a state of agony from the difficulty in his breathing. His face was collapsed & shrunk, & he had a most dreadful aspect. On feeling his pulse, I found it strong but irregular: the stroke was quick but not remarkably frequent. I regarded it as a case of serous apoplexy of the lungs. I supposed that there was a strong disposition to effusion: that the expectoration, which was incessant, might yield some relief; but that unless the vessels could be speedily unloaded, the patient must die. This was one of those cases in which no time is to be lost, & in which the interposition of practice must be prompt & powerful. I bled the patient; & as the blood began to flow, there was an evident amelioration of the symptoms.

I went on bleeding, & the patient getting better, till 30 or 40 oz of blood were abstracted. At the end of this process there was a striking amendment in the symptoms. Immediately after the bleeding, I used the fumes of rosin. This remedy was recommended by Dr. Rush in cases of peripneumonia notha; & I had seen it most signally useful in one instance of the disease that had fallen under my own observation. In the case of this gentleman, the rosin was thrown on a shovelful of live coals, & the patient was soon enveloped in a fog of smoke. He inhaled it with pleasure, & felt relieved. In addition to the rosin, I considered it necessary to give internal expectorants, which might at the same time operate on the nervous system. With this view I gave the lac assafœtida. This was alternated with a decoction of seneka, which you know is a powerful expectorant. A large blister was applied to the breast. — I saw this old gentleman in three attacks of the disease, from all of which he recovered under the treatment I have just detailed. He was finally worn out, & died at last of hydro-thorax.

Case of Sarah Lippincott. — The subject of the present note was a female truly lovely in old age. For sweetness of temper & disposition she was equalled by few, & I doubt whether she was surpassed by any. For some months before her attack, her health had been gradually declining; her countenance had shrunk, & she had begun to exhibit the marks of old age. On the morning of the 13th of the 3d mo. I was called to see her. On inquiry I found that she had been much debilitated for

several weeks; had been troubled with dyspnoea, particularly in ascending a flight of stairs; & for 3 weeks, in consequence of a cough with which she was troubled, she had taken twelve drops of laudanum every night. The night before I was called she had suffered extremely with a sick stomach; & in the morning I found her with evident disease of the chest. I suspected hydrothorax; but as she could lay with her head low, & there was no marked diminution of urine, I did not make up my mind positively; but concluded to apply a large blister to the chest, & wait a few hours for further light on the case. Her pulse, at this time, was firm & without much irritation. I visited her again in the afternoon. The blister was on her breast; no material change had occurred, & I concluded to give her 15 drops of laudanum at night, intending next morning to pursue some regular course of treatment. But about 10 o'clock I was suddenly summoned to her to witness a state of agony, coupled with extreme danger, such as I have seldom seen. Just before I was called she was seized with most violent apoplexy of the lungs. When I arrived she was panting for breath in the most distressing manner; unable to lie in bed, & in a state of the most extreme suffering. Her skin was cold & clammy; her countenance shrunk; her lips livid; her pulse, happily for her, was strong; & unlike other cases I have seen, she coughed but little. I proposed bleeding, to which she rather objected. I applied sinapisms, & requested an immediate consultation; for I was really afraid she would die in

a short time; & I was desirous of having some one of my medical friends with me, that my views of the case might be judged of, & the responsibility divided. Dr. Otto, who lived near, saw her with me very soon. He fully concurred with me in the use of the lancet; & although it appeared as if every gasp would be her last, I tied up the arm & opened a vein. As the blood flowed, there was a gradual abatement of her distress; & we persevered until we had taken away about 40 oz. During the bleeding, particularly towards the conclusion, the livid colour of the lips changed, & the countenance became more natural. After the bleeding we commenced with the fumes of rosin, which were very grateful to her, and evidently relieved her breathing. We next tried the volatile julap: but this did not appear to suit the case. I then gave her the following mixture:

℞. Assafoetida ℥iij

Mint Water ℥vj. Rubbed down.

The dose was a tablespoonful every hour, to which was added 5 drops of antimonial wine. The very first dose of this mixture afforded her relief. I remained with her till nearly 2 o'clock in the morning, & then left her with directions to continue the assafoetida & the fumes of rosin. Next morning, (the 14th,) at 9 o'clock, I found the patient quite as well as we could expect, considering all circumstances. The blister on her breast had drawn pretty well; her breathing was still laborious; she coughed & expectorated some mucus, but it was raised with difficulty. On considering the case

we concluded to draw a few ounces of blood; hoping in this way to relieve the lungs. I took away about 4 oz. When she complained of being sick. Her skin became ~~more~~ cool, though her pulse did not materially vary. Although the quantity of blood taken was so small, yet it really appeared to afford relief. We now placed her on the use of a table spoonful of the decoction of senaka every hour, & a wine glassful of wine whey in the intervening half hour. The whey was formed of two parts of milk & one of good Madeira wine. In addition to these, we advised an occasional dose of assafetida whenever she was restless, & the continuance of the fumes of resin. During the day, as well as the preceding night, she slept a great deal: but her naps were short, & her breathing at times very laborious, particularly during sleep. Her bowels were opened during the course of the day. At one time she could not take the wine glassful of wine whey, & we allowed arrow-root seasoned with wine as a change. During the next 24 hours the same practice, with a little variation, was pursued, & an evident improvement was observable. Her position in bed was natural; & she expectorated, though not so freely as we could wish. Her respiration was not yet natural. The resin, at first so grateful & relieving, now became disagreeable to her, & was omitted. The same general plan of treatment was continued through the night of the 15th, which was passed uncomfortably in consequence of the senaka purging her more frequently than was desirable. She recovered from this attack; but died in the early part of summer.

Now, in these two cases, you see a practice that is mixed, &

you might suppose it contradictory. On the one hand the lancet is employed with great boldness, & on the other diffusible stimulants are resorted to. You would naturally inquire, how should this be? But you must recollect that we are treating, not inflammation; but merely congestion of particular vessels. You should recollect also that in some very debilitated subjects, there is a strong tendency to local congestion without any inflammation. Thus, in the case which I have related, there was a strong determination of blood to the lungs, producing an engorged state of those organs, which, if ~~not~~ suffered to continue must have produced fatal consequences. This called for the lancet. But after the vessels were unloaded, & the hazzard of effusion was thus removed, we had to contend with the danger from debility. Hence, in this stage, wine whey & volatile alkali are very appropriate; & at the same time to relieve the lungs still further, & to establish a natural outlet, less debilitating than V.S. expectorants may be introduced with great advantage. Hence, assafetida, senka, & rosin are employed. Besides its powers as an expectorant, assafetida proves useful by its operation on the nervous system. Rosin sometimes produces the most useful & striking effect.

If you arrive before effusion has occurred, & your patient has a strong, active pulse, he may, probably, for that time, escape. But if you find this dreadful condition of the pulmonary organs with a languid circulation, it is probable that all your attempts will be unavailing. But let the pulse be

as it might, I should open a vein, & judge from the effects produced, whether it would be proper to proceed.

Before closing the subject, I wish to call your attention to another case which might be termed apoplexy of the lungs, not from serum, but from blood.

Case.— During my attendance in the Philadelphia Dispensary, I was called one morning into some remote street, to see a black man. He had been taken ill in the night with extreme difficulty of breathing. When I saw him in the morning, he was labouring under difficult respiration, free from pain, & with a pulse barely perceptible. In this case the fatal stroke had been given, & all my efforts to save him were unavailing. I had an opportunity of making an examination after death, & found that the lungs were completely engorged with blood.

You will recollect then that peripneumonia notha is an apoplexy of the lungs, generally of a serous character, but occasionally without effusion of serum.

We not unfrequently have to witness serous effusion into the lungs as one of the last symptoms of thoracic disease: it is one of the most common terminations of pneumonia, when the complaint ends ~~frequently~~ fatally.

Spasmodic Affections of the Respiratory Organs.

Asthma.

Asthma may be regarded as a spasmodic disease affecting the respiratory organs. I shall not enter into an accurate account of the disease & its treatment; but shall merely make a few general observations.

Asthma is a hereditary complaint, & is often much more alarming in appearance than in reality. I will almost venture to say, that if you are accustomed to attend patients in this disease, you will be extremely alarmed on witnessing a paroxysm. You might suppose that it would destroy life: yet the fact is, that patients affected with this disease often live to old age. Many persons have passed their 80th year, who during their life have been more or less affected with asthma.

In the commencement, in young & vigorous subjects, an occasional use of the lancet is beneficial. But when it assumes a chronic character, as it almost always does, I am accustomed to depend very much on the use of antispasmodics.

Spasmodick Cough.

Occasionally I have met with patients who were suddenly seized with a spell of almost incessant coughing,

which seemed as if it would wear them out, & fatigue them almost to death. I once saw a case of this kind with Dr. Emlen, in which an emetic afforded immediate relief. Emetics & antispasmodics are the proper remedies in this complaint.

Spasmodic cough, however, sometimes assumes a more chronic character; & then, without care, it may be confounded with diseases of an inflammatory character. From these it differs essentially, & would be aggravated by the antiphlogistic treatment. In order to illustrate this disease, I will present you with a case.

Case. – I once attended J. T. Longstreth's wife through a severe paroxysm of this disease. In several previous attacks, I had adopted a plan of treatment rather of the antiphlogistic character – antimonials were liberally employed, & opiates were frequently exhibited. But I was led to remark in the course of my attendance, that the remedies employed appeared to produce no effect. I attempted to quiet the cough with anodynes, but I was disappointed. The usual pectoral mixture totally failed in relieving it. She would get through the attack; but I was not satisfied that any thing I did was of any real service. When I was called in another attack, I determined to pursue a different course; & instead of the antiphlogistic treatment, to resort to the use of antispasmodics & a generous diet. As I had failed in relieving the cough by the usual pectoral mixtures & anodynes, I made up my mind to try some other plan. I put the patient on the use of a remedy which produced the most happy effect, & calmed the cough surpri-

singly: it was a mixture which had for its base a most active ingredient, the rectified oil of amber. The prescription was as follows:

℞. Rect. ol. of Amber, gtt LXXX.
Pulv. G. Arab.
Loaf Sugar, āā ℥ss.
Tinct. of balsam Tolu ℥ij
Water. ℥iv. M. Dose a table spoonful, to be administered every one, two, or three hours, pro re nata. Besides this remedy, I found considerable advantage from the infusion of valerian, in the proportion of one ounce of the bruised root to one pound of water. The dose was a wine glassful frequently repeated. The diet was generous. Treated on this plan, instead of remaining sick for three weeks, as she had previously done, she recovered in a few days.

Case 2. – Sometime after the above case, I was called to see a French Lady, in consultation with Dr. Monges, who laboured under the same disease. She was attacked with the cough soon after confinement with a child. It proved very obstinate; & her friends were under the impression that she was in a consumption. On hearing the account of the case given by Dr. Monges, & making my own observations on the patient, I was induced to believe that the cough arose from debility; that it was spasmodic, not inflammatory; & was to be treated, not by antiphlogistic remedies, but by those of an opposite description. I was struck, as in the former case, with the total inefficacy of the usual pectoral mixtures in relieving

the cough. At the same time the absence of fever, & the strong symptoms of debility confirmed me in my opinion as to the proper course of conduct. I stated to Dr. Mongus the case of Mary Longstreth, & advised the oil of ambra. He agreed with me as to the propriety of it, & it was employed. It acted most happily; & the cough which had been extremely obstinate, yielded to the remedy. The patient was kept on the tonic plan; & measures were adopted calculated to invigorate the system.

I have thought it proper to present you with these cases, to prove the existence of a cough which has nothing to do with an inflammatory condition of the lungs. If in the last case the idea had been taken up that the cough, & the patient treated accordingly, she would have been placed in a dangerous if not an incurable condition.

Sometimes a particular kind of air will affect the pulmonary system, & induce cough. I recollect a patient in the Alms-House, who was affected with cough of a very obstinate nature, which completely resisted the treatment usually resorted to. At last he determined to leave the institution; & the simple change of air removed the cough.

Peculiar Catarrhal Affection of Children.

In the course of my practice among children I have met with a disease to which I wish particularly to invite your attention. It appears under the form of a catarrhal affection. The

patient appears, & really is, extremely ill. In some instances it seems as if life were in the most imminent danger. The child is afflicted with difficulty of breathing; & the dyspnœa, though constant, to a greater or less degree, is yet much more violent at one time than at another — assuming the paroxysmal type. The paroxysm resembles that of asthma. In some instances I have seen a cold skin, shrunk countenance, & cold cheek. The last symptom is worthy of observation. I am much in the habit, in the pulmonary diseases of children, of laying my hand on the cheek, to ascertain its temperature. If I find it cold, I consider the situation of the patient so critical as to call for my close attention. The pulse is generally feeble; but, in some cases, it has a little irritation which might lead an inexperienced practitioner into an opinion that the lancet is proper. I have known this disease to occur when the catarrhal fever has prevailed among children; & then, as a general rule, the lancet was proper. It seems as if the same cause, in persons of different constitutions, might produce diseases requiring very different plans of treatment.

Case. — I will read you a case of this disease, as it occurred in the child of Robert Buckhart, a blender in Front street.

I was called in the morning of the 11th of 7th mo. 1810, to the infant daughter of Robert Buckhart. Her breathing was difficult, her pulse febrile in a moderate degree, & she had some cough. I was informed that a few days past she had been affected with diarrhœa which had ceased; her gums were swelled. I lanced them immediately, & concluded that by restoring the diar-

rhœa, she would be relieved; & ordered some castor oil, & also a stimulating liniment to rub the breast. On visiting her in about 4 hours afterward, her breathing was more difficult, & her bowels not moved. I directed a purge of calomel & an enema, took a small quantity of blood from the arm, & directed antimonial wine in small doses. About 3 hours after this, I was sent for in great haste; & on my arrival found that her friends believed her to be dying; & really, from her appearance, I did not wonder at their alarm. She was apparently insensible; her respiration was extremely laborious; her countenance sunk, & her pulse very feeble. I should have given the case up pretty much, as a gone one, had I not witnessed recoveries under similar circumstances. I ordered the warm bath, sinapisms to the feet, a large blister to the breast, injections containing assafœtida, & calomel, as the bowels continued constipated, & my favourite medicine - gum assafœtidea in mint water, given frequently & in large doses; & to the astonishment of almost every person, the poor little creature recovered perfectly.

Dyspnœa. — The little subject of the present memorandum, was affected very similarly to R. Buckhart's child; although the prospect of immediate dissolution was not quite so threatening. I was called in the night on account of extreme difficulty of breathing, accompanied with a pallid countenance, cool skin, & feeble pulse. The dyspnœa varied; sometimes it would be considerably better, then recur with violence. Throughout the disease, the circulation seemed rather languid; hence no bleeding was required. The treatment principally consisted

in warm bathing, a large blister to the breast, opening the bowels with small doses of calomel, & the liberal use of assafoetida, given by the mouth, & at night in the form of enema combined with a few drops of laudanum. Also the volatile julap was employed occasionally as a substitute for the assafoetida. After the more alarming symptoms were subdued, it was severely afflicted with colic, which yielded to mint water, fomentations, &c.

Since this last case, I have occasionally met with this form of disease among children; & I have great reason to be well satisfied with the use of assafoetida in the treatment of it. But I think I can propose a very valuable addition; I mean the fumes of rosin. In the family of Pro. Suffrain, I have seen two cases of a most violent character, in which I gave the lac assafoetida, attended with senika; & the fumes of rosin were liberally employed. This last remedy, so far from being unpleasant, is, in general, exceedingly grateful. I kept the room almost in a fog of smoke; & the respiration was in consequence, much improved. In addition to these remedies I employed blisters to the chest, & the warm bath; & attended to the state of the bowels. I am not sure that calomel answers better than castor oil, as an opening medicine.

In the use of assafoetida, in this disease, I am guided very much by the age of the child. I generally tell the mother to give it of such a strength as the child can bear. For instance, I direct ℥j to be rubbed down with ℥j or ℥ij of mint water; & of this, a tea spoonful is the proper dose. You need not

fear giving too much of the medicine; for it contains no narcotic principle. A tea spoonful of the tar assafetida is to be given one hour, & a dose of the decoction of senika the next. I continue the senika, sometimes, till it produces vomiting.

I have found my success very considerable in this form of disease in children. I believe an opposite practice, founded on a belief that it is an inflammatory affection, would be likely to produce more mischief than benefit.

I have seen the same peculiar spasmodic respiration in the latter periods of hooping-cough. This you will find a very serious disease. A practice very similar to that above related, I have seen singularly useful in some cases of pertussis, in the latter stage, accompanied with difficulty of breathing. When this occurs, the disease is always dangerous. While the little patient runs about, & vomits freely, & the respiration remains natural, there is seldom any danger. But when we find no disposition to emesis, & at the same time dyspnoea makes its appearance, we must be closely on the watch. The complaint in this case, is not generally inflammatory, but spasmodic; & antispasmodic, not antiphlogistic, measures, are appropriate. Assafetida, the rectified oil of ambes, senika, & the fumes of rosin are valuable remedies.

In one case I recollect, when this state of things appeared in the last stage of hooping-cough, & the danger was most imminent, I saw nothing more useful than the steady employment of assafetida & rosin. I have also known anodyne

injections exceedingly useful in this case. But here let me observe, that there is one rule with regard to this remedy, which I wish you to remember: It is customary in the administration of laudanum, as indeed of other medicines, to give three times as much by the rectum as you would administer by the mouth. But from observations which I have made, although this rule is generally correct, yet I am inclined to believe that constitutions vary much in this respect; & that, in some individuals the comparative sensibility of the rectum to the stomach is much greater than is commonly imagined. You should, therefore, be careful not to let your calculations be too liberal. If you wish to give an anodyne injection to a child of one year old, with this complaint, take a large tea spoonful of lac assafoetide prepared as before mentioned, & add to it a dessert spoonful of flaxseed tea. To this 6 or 8 drops of laudanum may be added. This quantity is quite sufficient for the first trial. If no unpleasant effects are produced, you can afterwards increase the quantity.

Catarrhal Affection which Occurred in John H. Cresson's Family.

The parents of this family were most singularly afflicted in the loss of their children. They followed to the grave six sons in succession — all of whom died in early infancy. The oldest was 14 mo. the youngest 5 months. Of these 5 died of a disease which I am a-

bout to describe. I will here remark that the deaths were confined to the male children. So fatal had this complaint proved, that when a child was attacked, the parents considered it as inevitably gone. The mother informed me that in one instance, a girl had been attacked & recovered without medical treatment. The last of the five died under my care, & I had an opportunity of seeing the disease from the commencement. The other cases had been treated by antiphlogistic measures, as they were supposed to depend on an inflammatory condition of the lungs. That which fell under my care was managed differently; though not exactly on the plan which I afterward adopted. The child was delicate, & had some symptoms of pertussis blended with the disease.

The complaint appeared in the form of a catarrhal affection, with some cough, & steady difficulty of breathing, as described in the preceding cases; but in some of these there was more apparent action. The last one that died I had an opportunity of examining after death. I ascertained that there was not the slightest appearance of inflammation in the lungs. There was some effusion into these organs, such as we often meet with, & such as may occur in cases of debility; but there was no effused lymph. The knowledge derived from this dissection led me to reflect on the subject, & I reasoned thus with myself. This child from some cause which I cannot explain, possesses a constitutional debility of the pulmonary organs. This constitutional debility is peculiarly inviting to disease, & when the disease makes its appearance, death inevitably follows. Under this view I conclude

that a prophylactic treatment is all important.- My object was to pursue some steady plan of prevention; some method of invigorating the part constitutionally predisposed to debility, & place the patient in a condition to resist the disease if it should make its attack. The fact which was related to me by a gentleman of New-England, & which I mentioned on a former occasion, viz. that he had rarely if ever known a caulker afflicted with pulmonary consumption, presented itself to my mind; & I at once advised the parents to commence a course of prophylactic treatment with the remaining children, & with those which might afterwards be born. I advised them to subject their children to the fumes of rosin at a certain time every day. Having suffered so much, they were fully prepared to enter heartily into any plan I might direct. Accordingly, with the remaining children, & one born sometime afterward, this practice was pursued. The children became fond of it. In progress of time, I was summoned to see the infant (which had been subjected to the prophylactic treatment from its ~~one~~ birth) labouring under this terrible malady. It was apparently extremely ill. I had determined, in my reflections on the subject, to lay aside all idea of inflammation in any subsequent case. I employed the following treatment: The room was enveloped in a fog of rosin, & the child would paddle in the fumes with delight. A blister was, at once, applied to the breast, & the bowels were opened with castor oil. But I am inclined to believe, from what I have since seen, that a little

time was lost in waiting for the operation of the medicine. I also prescribed a mixture containing rectified oil of amber, alternated with seneka. With this practice I had every reason to be delighted. The child shortly recovered; and this was the first instance in which a son had passed thro' the disease. Since that time, I have attended the same child in the same disease, with the same happy result. I also attended, in the same complaint, two other children, females, one of whom was extremely ill; & both recovered. I will read you an account of the treatment, as drawn up & presented to me by the parents.

"3d mo. 16th, 1820. – Called Dr. Parrish to Mary & Sarah, both of whom were very seriously indisposed. The decoction of seneka snakeroot was immediately directed. At 9 o'clock, P.M. gave Mary enough of it to occasion vomiting; at 10 o'clock, applied poultices on her feet & a blister on the breast, & administered a tea spoonful & a half of the following mixture:

℞. Ol. succin. rectif. gtt xxxiv
Sacch. Alba
Pulv. g. Arab. āā ℥j
Aq. Cinnam. simp. ℥ij

The seneka & the oil of amber were continued alternately thro' the night. Her mother, who sat up during the night, was struck with an obvious improvement about 2 o'clock in the morning. The same treatment was afterward continued, tho' not with so much regularity. This child has just completed her 3d year; & in infancy had been raised from a very

low state by the application of similar remedies. Sarah, who was only 8 months old, was treated in the same way, the proportion in the dose being conformable to their ages. It was observed in her case that the seneka operated powerfully on the bowels, & occasioned a great prostration of strength as to render the discontinuance of it necessary. The quantity of the mixture of the oil of amber given her was half a tea spoonful every hour. About 2 o'clock, P.M. on the 17th, a great change for the better had taken place, & the same treatment was continued. The night of the 17th was passed ~~away~~ very comfortably by Sarah, & she was manifestly improved. The other daughter was distressed through the night with violent spells of coughing, which continued during the next day. In the evening of the 18th, 16 drops of antimonial wine were given in the decoction of seneka, & poultices were applied to the feet. Sarah continued to mend through the day; but was somewhat restless at night; & the snake-root was resumed. Mary passed the night better than before. On the 19th both of them were so much recovered that little further medical attention was necessary."

Fifty cases, in this family, I have treated on this plan, and every one with success. - We have here an instance of what may sometimes be done by clearly understanding a disease. From its symptoms, the complaint might have been mistaken for an inflammatory catarrh; & in some instances was treated as such. The information I derived from dissection, induced me to put inflammation entirely

out of the question. This goes to prove the necessity of studying a disease more closely, & of endeavouring to acquire a knowledge of peculiarities of constitution, or, in other words, of idiosyncracies. The longer I live, the more strongly I am convinced that idiosyncracies of an important character, are sometimes met with in practice; and much observation & considerable experience are necessary before we become fully aware of them. I regret to say that I have known a time when experience was divided, & principles, not facts, were considered important to the practitioner. To this I do not consent. I only regret that there is not more experience among us. If medical men were more careful to keep a record of their experience, medical science would be promoted, & many patients would, no doubt, be rescued from the grave.

From what I have said with regard to the disease which prevailed in J. H. Cusson's family, & from the cases which I before mentioned of another complaint in children, & of the spasmodic cough of adults, you may gather that the pulmonary system is very liable to spasmodic disease. In children complaints of this nature are very difficult to be distinguished from those of an inflammatory character. Children are unable like adults, to speak and to express their feelings. They cannot point out the particular part of their body which is the seat of disease. As, therefore, we are cut off from vocal communi-

cation with this interesting class of patients, it becomes the more necessary for us to study the language of nature as it speaks in their actions. To understand this requires much experience. An affectionate mother, or an attentive nurse, generally knows more of the complaints of children than a young practitioner. I wish, therefore, strongly to impress on your minds the necessity of studying attentively the diseases of infants, & especially those of the pulmonary organs.

Pneumonia.

You will find that practical writers, in pursuing nosological arrangements, draw a distinction between inflammation as it affects different parts of the cavity of the chest. Thus we have the names of pneumonia, pleuritis, &c. But I do not believe that any practical advantage can result from a mere subdivision of the inflammatory affections of these parts. I am inclined to the opinion that if active inflammation affects the pleura, the lungs themselves will be brought more or less into sympathy; or, on the other hand, if the substance of the lungs is involved in inflammatory disease, the investing membrane will be likely to participate.

Patients affected with pneumonia are generally seized with a chill. This is succeeded by fever, &, as a general rule, more or less pain, (sometimes very acute pain) is experienced in some part of the thorax. The pain is often confined to one

side, & every attempt to expand the chest by a deep inspiration generally increases it to a great degree. Hence, when called to a patient with pneumonia, it is a general practice to request him to take a long breath with a view of ascertaining this point. The efforts to cough not unfrequently excite a great deal of pain & distress. As the disease advances, some mitigation of the symptoms is commonly manifested by a more free expectoration. When this is the case, we often find the disease disposed to yield. The expectorated matter about the 5th day is not unfrequently tinged with blood. This is a circumstance which a young practitioner should be fully aware of; & as Cullen justly remarks, "he should not carry antiphlogistic treatment too far, from apprehension of hemorrhage." If the disease goes on happily, by the 7th day, we generally have a favourable crisis — we have a decline of pain, easy respiration, copious expectoration, & an absence of fever. This may be regarded as a favourable issue of a common case of pneumonic inflammation. But in the course of your practice, you will be called to witness cases of a different character. You will find every effort to relieve the pain ineffectual. Sometimes confined to one side, it will suddenly leave this & attack the other. It is manifest that the disease has now invaded a new part, & at a time too when the system is less able to resist it than at the commencement. An unmanageable & fatal ~~one~~ case, not unfrequently terminates about the same time as a favourable one; i.e. on the

7th day: & this termination is often by fatal effusion. You will visit the patient & find him labouring under extreme difficulty of breathing, a rattling of mucus in the trachea, expectoration almost entirely suspended, livid nails & lips, cold clammy skin, a feeble pulse, & hippocratic countenance. Death soon closes the scene. These remarks apply to cases of an ordinary kind. But we occasionally meet with symptoms very different from those described. Sometimes the inflammation is suddenly transferred to the brain; symptoms of phrenitis arise, & in one case which fell under my observation, something like apoplexy closed the scene. The occurrence of phrenitis in the progress of pneumonia, is always to be regarded as extremely dangerous. There are other cases which pursue a still different course. After having watched the patient with a great deal of solicitude & interest, & administered those remedies which you may judge most suitable, you wait with anxiety for the period of a favourable crisis. But this crisis does not arrive. A mitigation, it is true, of the more violent symptoms takes place; there is less urgency in the pain, cough, & respiration — if I may be allowed the term, a semi-crisis occurs. But still a great deal of mischief is going on in the chest — the pulse becomes very irritable; a hectic blush on the countenance is sometimes exhibited; a cough harassing & often dry is observable; occasionally chills, succeeded by flashes of heat & fever, & followed by sweats, make their appearance; & in short, the practitioner per-

cives that symptoms of hectic fever are wearing down the patient. He understands fully what is to happen. There is every reason to believe that vomica or abscess of the lungs has formed, or is forming. Some of these cases of vomica will in the end terminate favourably: & there have been instances where large collections of matter in the chest have been discharged & the patients have recovered. The bursting of a vomica is a thing well understood by every practitioner. If this abscess find a ready outlet through the trachea, & its contents are discharged in that way, the patient may sometimes recover. The recovery seems to be conducted on precisely the same principles that regulate inflammation of any other part. After suppuration & the loss of substance by ulceration, granulations may arrise & fill up the cavity, & the parts become consolidated. In this way abscesses in the lungs sometimes do well. It occasionally happens that the abscess points externally; & the pus may be discharged either spontaneously or by a puncture through the parietes of the thorax. Cases of this kind may also do well. But it sometimes happens that the vomica bursts & the matter is effused, without an outlet, into the substance of the lung itself. In this case immediate death not unfrequently occurs. Here I wish to be distinctly understood, as drawing a very marked line between abscesses of the lungs as a consequence of common inflammation, and real phthisis pulmonalis. The two complaints are frequently confounded, & the practitioner very honestly as-

ounces to himself the credit of curing pulmonary consumption, when in fact nature has been curing a common abscess of the lungs on the same principles that she would cure an abscess in any other part.

With this general outline of pneumonia before you, you will be prepared to understand me when I say, that it is a disease of local inflammation, attended with symptomatic fever; & that it requires, in common, a very free use of the lancet. You will recollect that we have to contend with inflammation in a part very vascular, & easily excited to disease. The measures, therefore, should be as prompt, & pushed to as great an extent, as the strength of the patient will allow. In pursuance of the common course which has been adopted in the treatment of fever, we might very naturally suppose that the next step after relieving the blood vessels by the lancet, should be to evacuate the bowels by brisk cathartics: but I believe the experience of intelligent practitioners is against this plan. Drastic purges are not likely to be useful in pneumonic inflammation. It is, however, always proper to unload the bowels by gentle purges; & for this purpose epsom salts, castor oil, & similar articles may be used. In addition to these, demulcent drinks are strongly recommended. Flaxseed tea acidulated with lime juice & barley water are particularly proper, especially in the early stage of the disease. Antimonial medicines hold a high rank in the treatment of pneu-

monia; & hence, the common antimonial powder is very generally prescribed in the commencement of the disease, after bleeding & gently evacuating the bowels. But you should remember that you have to contend with a very harrassing cough, which jars the patient, & throws him into violent pain; & that you must adopt some plan to relieve this without increasing the febrile action. Some practitioners are opposed to the use of opium, even in small quantities, in the early stage. But a physician is frequently under the necessity of choosing between two difficulties, & to adopt the course which will prove of the most advantage. In the case before us, the lesser evil is to employ opium in small doses, & in combination with some articles which a tendency to determine to the surface. It is a common practice with me to prescribe some pectoral mixture, even in the early stage. In selecting a formula I always use laudanum in preference to the paregoric elixir. The latter is objectionable on the ground that it contains a large proportion of alcohol than laudanum does; & besides, there is one or two articles in its composition not well suited to the early stages of pneumonia. My object is to combine with the laudanum some expectorant, as antimonial wine, & to mix these with a rich mucilage. The following formula will answer very well:

℞. Ext. Glycyrrh.
Pulv. G. Arab. āā ℥ß
Tinct. Opii gtt LX

vin. Antimo. ℥iij
Aq. Fontan ℥vj. M.

Instead of the antimonial wine, you may use two grains of tartar emetic. Some persons dislike liquorice: for these loaf sugar may be substituted. The dose is a table spoonful which in the early stages of pneumonia may be administered every 2, 3, or 4 hours according to the urgency of the symptoms.

There is another part of the practice which I regard as much more important, & about which physicians disagree. Much has been said about a blistering point: we have heard a great deal about the general excitement in the system, & are taught by some that this excitement is greatly increased by blisters. It is necessary, therefore, they say, to reduce the system by bleeding, &c. to the blistering point: viz. to that point in which blisters may be applied without danger of increasing the fever & the local inflammation. To effect this requires, according to these practitioners, 2 or 3 days. On this subject I wish to speak with decision. I have had extensive opportunities of treating inflammation of the lungs, especially in the Philadelphia Dispensary; & I have no hesitation in saying that I can bring a patient with pneumonia to the blistering point as soon as I please. I wish no longer time than is requisite to bleed the patient once & unload the bowels. I can, at once reduce the system sufficiently by the lancet: but I prefer waiting till the bowels have been vac-

vated, as it would be inconvenient for the patient to be getting up & down with a blister on his side. The blister should be large. In pneumonia I regard the inflammation as the cause of the fever with which it is connected, & I believe it to be important for the practitioner to direct his remedies early & promptly to the seat of the disease. Therefore, I would by all means, advise you to employ early blistering in pneumonic inflammation.

After the disease has lost the violence which generally attends its accession, I believe a judicious use of opiates at night, as recommended by Cullen, to be particularly proper. Towards the decline of the disease, a grain or a grain & a half of opium, with one or two grains of ipecacuanha, will procure rest at night, & the patient will often be greatly refreshed in the morning.— But I should have observed, that in the progress of the disease, for the first few days you will frequently be under the necessity of repeating the bleeding, sometimes twice a day, or even oftener, if the symptoms are urgent.

There is one point to which I wish particularly to direct your attention. When the disease is in its wane, it is not uncommon for free expectoration to take place, & for the matter to be tinged with blood. Here the young practitioner should be on his guard. He might think that there was some violent action in the lungs, & an additional call for the lancet. Theory may say one thing, but experience says another. The experienced practitioner will tell you that there is a disposition in the pulmonary organs to re-

lieve themselves by free expectoration. Nature is holding the lancet in her own hand, & is bleeding herself. She opens a thousand little vessels in the lungs, & pours out mucus sometimes mixed with blood. At this juncture, when there is a decline of fever, & an increase of expectoration, if the practitioner interfere & use the lancet freely, he may materially interrupt the salutary efforts of the system; he may lessen the vital power, diminish expectoration, (which is important at this crisis,) & debilitate the patient without making any salutary impression on the disease. Hence, I should say that while it requires great judgement to determine on the extent to which blood may be abstracted, it requires equal judgement to know the stopping point.

This then, forms a general outline of the practice adapted to common cases of pneumonia. But I ought to say that you will often meet with cases of a very mixed character, which, from a variety of causes, will require a deviation from the course which applies to patients generally. Thus you will see instances where the evidence of pneumonic inflammation in the onset of the disease is very obvious, & yet it is so combined with other symptoms, as to render the common practice inadmissible. We sometimes meet with cases in which the disease is ushered in by diarrhoea. I think I can say, as the result of considerable experience, that I have never seen a case of pneumonia ushered in by diarrhoea, that has

not run into a low form of fever, & involved the patient in great jeopardy. In such cases, the lancet, so far as my experience has gone, cannot be used with that freedom with which it is employed in ordinary cases. Instead of it, blistering should be early resorted to. If any blood is taken, it should be with great caution; & the best method is to use cups.

In some cases of pneumonic inflammation, the strength of the patient fails, & when expectoration is difficult, you will find it necessary to resort to measures that will have a two-fold effect. Some remedy will be necessary which, while it elevates the whole system, possesses at the same time expectorant qualities. For this purpose the volatile alkali is admirably adapted. You will also meet with instances in which senna, (not proper in common cases,) will be obviously useful.

I wish now to give you a case or two of pneumonia ushered in by diarrhoea. I have stated that I never saw an instance of this kind without finding it difficult of management, & disposed to run into a low form of disease.

Case of Wm. Kempton & his Wife. — When I was first called both were labouring under diarrhoea, with symptoms of pneumonia, & a low form of fever. The lancet was not employed. On the contrary, mildly stimulating measures were pursued, particularly with the husband. In both cases blisters were applied on the breast with great advantage. Serpentaria was used in the form of decoction.

We employed weak wine whey. Irritability at night was allayed by opium, & the heat & dryness of the skin were relieved by febrifuge draughts.- They both recovered contrary to expectation. The form of the disease I had reason to believe, was, in both cases connected with mental depression.

I will now read some observations which I made on pneumonia, during my attendance on the Philadelphia Dispensary, in 3d & 4th Months, 1807.

Many cases of pneumonia have come under my care; and as far as my experience has gone, great caution is requisite in the management of the disease: For, although it is presumable that extensive evacuations are always necessary in the commencement, yet variation from this practice is, in some instances, necessary. Instances have occurred, in my practice, of an early disposition in the disease to take on a typhoid form-, as is indicated by disturbed sleep, accompanied with a low, muttering delirium when dozing. In two cases I have known a spontaneous diarrhoea to appear, combined with the above symptoms. At the same time the skin will be hot, & the pulse of a peculiar kind- perhaps we might call it hobbling. At one moment it conveys the idea of arterial force; at another of debility- a combination of weakness & moderate strength that is not a little perplexing. If called in the early stage to a situated, I have not withheld the lancet; but, at the same time, I have used it with caution. The case of Wm. Bomford was of this description. I think it was on the 13th day of the disease that I

first saw him. He had been once bled; but when I visited him the state of his pulse was such that I thought it most prudent to substitute cups to the breast for the lancet. A large blister was applied after the cups. I directed the antimonial powder & pectoral mixture; but such was the irritable state of the pulse, & so profuse the purging occasioned by the powders that I was obliged to omit them. His situation was embarrassing. The decoctum pentaria in decoction was ordered with a view of supporting the system & with a view of promoting expectoration. On the following day, I began with my favourite remedy, ipecacuanha & calomel, to which a little opium was added. As the diarrhoea was soon checked, & the medicine did not seem to run off by the bowels, the opium was omitted. The patient became comatose. Cups were now ordered to the head, & a large blister between the shoulders. The coma left him, & he became delirious. At this time his bowels were constipated. On visiting him one morning, I believe the 7th day of his illness, I found him dressed & sitting in the shoe-maker's shop, insisting that he was quite well while his whole appearance indicated extreme illness. While in this delirious state, I requested my friend, Dr. Griffitts, to see him with me. His pulse was at this time was more active than it was in the fore part of his illness. The Dr. Advised me to purge him freely with calomel; to have his head shaved & a blis-

ter applied to it. The hair was cut off: but as the family would not allow the blister to the head, it was applied to the back of the neck. Five grains of calomel were directed every 3 hours till it operated; & ℥ss was taken before even a moderate effect was produced on the bowels. From this time he began to ~~consider~~ recover. When the affection of the brain was most violent, the disease of the breast was for the time, entirely suspended

Another patient in Prune Street came under my notice with pneumonia, who, at the same time, had diarrhoea. His skin was hot & dry, & his pulse throbbing. Typhoid symptoms soon appeared, such as muttering delirium, &c. He was relieved by a small bleeding, & by blistering. But the poor fellow would not be controlled; he continued to walk out & take care of his horse, ~~on~~ the day previous to that on which he died. He had been accustomed to the intemperate use of ardent spirits. On visiting him one morning, I found him labouring under the symptoms of pneumonia notha. His countenance was livid, his respiration laborious, his pulse nearly gone; & in a few hours he died.

In cases where the disease will not admit of extensive evacuation by the lancet, (which in acute pneumonia with a tense pulse, is certainly a most important remedy,) calomel is my sheet anchor. I generally give it in combination with ipecacuanha. When the symptoms are urgent, I give gr ij of calomel, & gj of ipeac every 2 hours.

Sometimes it is necessary to add a little opium, if the purgative effect is inordinate. Blisters are also an important remedy.

In a previous lecture I spoke of some of the fatal cases of pneumonia terminating in effusion. As the following is rather an unusual case, & I had an opportunity of making an examination after death, I will detail it to you.

Case of Rebecca Robinson. – She was 29 years of age when admitted as a patient of the Phil. Dispensary. I visited her in the afternoon of the 23d of the 3d mo. 1809; and found her complaining of severe pain in the right side of the thorax, attended with a cough which always increased the pain. I immediately directed the loss of 12 or 16 oz. of blood as the pulse required. As the bowels were constipated, I ordered small doses of Glauber's salts, to be repeated every two hours till they operated, & advised the free use of demulcent drinks, particularly flax-seed tea. I also prescribed a pectoral mixture to allay the cough. On the morning of the 24th, I visited her again. The symptoms were rather less urgent; but the pulse being tense, I directed the loss of 12 oz. of blood, & prescribed the antimonial powder, in addition to the pectoral mixture; & a large blister was applied over the seat of pain. In the afternoon I found her complaining greatly of the blister, & was informed the pain had left her side: but I could not help suspecting that her anxiety to get rid of the blister, induced her to give this account. As the pulse was still tense, although the cough was a little abated, I thought it

right to direct another bleeding, & to pursue the same plan as before, during the night. On the morning of the 25th, she appeared very much relieved from pain; the cough had abated, but still the pulse was contracted & tense. V.S. to 10oz. was directed. In the afternoon the pulse began to flag, & the pain had ceased: but it was evident from her appearance that the danger was increased. In the morning she could make almost a full inspiration, with little difficulty; but now there was a sense of uneasiness at the breast. I directed a blister to be applied to it immediately. On the morning of the 26th, I was informed that she had passed an extremely restless night, and had thrown up some blood. Every symptom now indicated the utmost danger. Respiration was very laborious, the wists were cold, the pulse was scarcely perceptible, there was no pain, some cough remained; but expectoration which had been free, had now nearly ceased. Another large blister was applied over the breast, & sinapisms to the ankles. Stimulants were exhibited freely, as wine, wine whey, serpentaria & assafoetida; the latter articles with a view not only to their stimulant, but also to their expectorant qualities. Every exertion, however, was fruitless. Her respiration became more laborious, & she died at 10 o'clock on the night of the 26th.

Upon opening the body, 18 hours after death, the following appearances presented: The omentum was found adhering to the peritonium, & the upper part of the liver was ag-

glutinated to the diaphragm by adhesive inflammation. The right side of the thorax contained at least 2 quarts of an extremely fetid & brown or chocolate coloured fluid, approaching to black; & several lumps of coagulated blood were found in the cavity, & some were adhering to the pleura on the side of the thorax. The lung preserved its soft texture, & several parts of it bore the appearance of incipient gangrene. The diaphragm, on the right side, was very much thickened & its muscular texture quite obliterated: it was of a firm consistence & of a dull white colour. On the other side it presented its natural appearance, & the left lung was very little changed by disease. The right was fixed to the diaphragm by two processes of the same texture & colour as the diseased portion of the diaphragm. The pericardium contained about two ounces of a light brown fluid, & a few shreds of coagulable lymph of a whitish colour floating in it.

Upon further inquiry, it appeared that she had borne 3 children; that her husband deserted her about 12 years before her death; that she had laboured under suppression of the catamenia for 3 years, & that during this time she had occasionally had a cough.

Pneumonia is often to be met with of a mixed character, in which case, owing to some constitutional peculiarity, or other cause, we are unable to pursue the course which has been stated to be proper in favourable cases of the disease. You will meet with persons, in the course of your

practice, who are subject to a constitutional cough. Elderly people of spare habit & pallid countenance are frequently subject to cough & copious expectoration. This cough continues for many years, & the lungs become so accustomed to the constant drain, that it is absolutely necessary to the very existence of the person so affected; & that which in common cases would be regarded as a disease, in these individuals constitutes a state of things essential to the preservation of life. When in such persons the cough ceases, they become extremely ill, & during their illness the return of the cough is hailed as the messenger of life & health to the patient. I wish to put you on your guard against mistakes with respect to this class of patients. In winter & spring they are often attacked with increased difficulty of breathing, & with some symptoms of pneumonic inflammation, with a loss of the cough. Here if we were to pursue a course of treatment, such as in common pneumonia in persons of vigorous habits, we should rarely fail of doing more harm than good. Depletion must be resorted to with the utmost caution. In some cases the lancet must be altogether omitted; in others it may be cautiously employed; but even in these the use of cups should be preferred. Your principal reliance should be on early blistering, expectorants, & if the strength fail, mild stimulants. Among these wine & volatile alkali hold a distinguished rank. With the volatile alkali you may very advantageously alternate some powerful expectorant, as senka. I have been in the habit of combining senka & liquorice. I direct

℥ss of bruised senka & ℥j of bruised liquorice root to be put into 3 half pints of water & reduced by boiling to a pint. This is a mixture very well suited to some of these cases.

But I wish to impress on you the fact that these persons will not bear extensive depletion. The cases will go on for several days, the respiration will be extremely laborious, & the countenance shrunk; but as soon as you can obtain a return of cough, they get better, & ultimately recover entirely. I am not prepared to say how the fumes of resin would act in these cases; but I am inclined to believe that they would be well adapted to some of them.

Pneumonia occasionally requires another kind of practice. You will meet with cases in which you can employ a little depletion; but not so much as you may desire. You may apprehend that unless something more is done, effusion will take place; & you are desirous of instituting some mode of practice which may prevent it. I know no better method of conveying to you my meaning than by reading some observations I made when my mind was anxious about several cases of this kind which occurred to me while I was practicing as Dispensary Physician.

7th Mo. 4th, 1806.— Having finished a term of attendance at the Phil. Dispensary of 4 months, I have taken the pen to notice some occurrences relative to my patients in that institution.— In the 3d & 4th months, a number of cases of pneumonia came under my care. The first patient I lost with that complaint was Polly Garrison, a woman in Mid

alley. She was in the 6th day of the disease when I first saw her. She had been once or twice bled; but at this time I did not think the lancet proper. I directed a blister to be applied to the side, gave a mixture containing tartarized antimony & nitre, & prescribed in the evening a decoction of senna. Next morning I found that the last medicine had not been procured. She was now labouring under all the alarming symptoms of effusion – a livid countenance, extremely laborious respiration, slight delirium, &c. Another large blister was applied to the breast, & the volatile alkali was administered in the form of julep – all in vain; she died in the evening, on the 7th day of the disease.

John Peters, a French black, was brought into the Poor-House sometime in the same month. The poor creature was in a deplorable state, covered with filth & rags. He had been picked up in the street on an extremely cold morning, & sent to the house by one of the guardians of the poor. He was complaining of pain in the side, which he said was occasioned by a blow on the ribs; but it was evidently the effect of pneumonic inflammation. Bleeding, blistering, & the antiphlogistic regimen appeared to be successfully employed, & poor John so far recovered as to be able to walk about his room. But still a hoarseness & an evident disease of his breast continued, under which I think he must have laboured sometime previous to his admission. I put him on the use of digitalis: but the poor fellow was at last seized with chillness, & great difficulty of breathing; & was affected with the common symptoms attending an ab-

ness in the chest. Senka was pushed very smartly, blisters were applied, & at last volatile alkali & other stimulants were employed — all to no purpose: he died several weeks after his admission.

Several cases which terminated successfully are worth recording.— Isaac Roach had been labouring under pneumonic inflammation, I believe, for six days before I saw him. He had been once bled. When I found him, he was complaining of considerable pain, & had a troublesome cough. I bled him that evening: but found that his pulse would not bear much depletion. The bleeding with a large blister relieved him immediately; & he as well as his friends thought he was on the recovery. But his symptoms spoke a different language: for, although he was able to get down stairs, yet it was evident that the disease was gaining fast in his chest. The quantity of urine daily diminished, a sense of weight & uneasiness in the breast ensued, & hydro-thorax was clearly present. The squill & calomel given in such doses as to induce a gentle salivation, very happily relieved him, & he was restored to his usual health.

A very stout young Irishman came under my care after he had been ill about 5 days. During that time very little had been done for him. Possibly he had been once bled. His case assumed an alarming aspect. His respiration was laborious, his pulse labouring, & the symptoms of incipient effusion brought to my mind the many fatal cases I had

been compelled to witness. I reasoned thus with myself: What shall be done? Bleeding, by lessening the quantity of blood in the lungs may relieve my patient; but the strength of the system is at this moment so much diminished, that if any sudden evacuation should induce syncope, I fear the power of reaction may be lost, and the event prove fatal. But something must be done, or in all human probability, the patient will die. When effusion is about to take place, or has actually occurred, in the cranium, for example, on what remedy do you chiefly depend for the relief of the patient? Is it not mercury? In the present case then, it is evident that to bring about a free expectoration, to arrest the progress of effusion, & at the same time to watch carefully the state of the system, & if possible to determine with accuracy at what moment evacuations should cease & restoratives substituted, is truly desirable. With this view of the subject I took away a few ounces of blood from the arm, carefully watching the effect on the pulse. A large blister was applied to the chest, & a decoction of Senka with a view to its expectorant effect, alternated occasionally with small doses of Ipecacuanna & calomel, was freely administered. He was also cupped on his breast the next day. Mercurial frictions were used every 3 hours to the thighs & a large blister was applied between the shoulders. I attended him very assiduously for several days, sometimes visiting him 4 or 5 times in 24 hours; & although my patient at times rambled & frequently picked at the bedclothes, yet I had the pleas-

ure to see him recover. When I thought it proper to discontinue the ipecac & calomel, & arnica, I substituted the serpentaria. This with the frequent use of nourishment in small quantities, very happily, restored him, with the blessing of Providence, to his former health.

I was called soon after the dreadful fire in Dock street, to see an Italian sailor in Swanson St. who had exposed himself considerably at that time. I found him labouring under pneumonic inflammation. He had been ill several days & had been once bled. His pulse was not very active. I drew a few ounces of blood from his arm, blistered him, & used the common plan of treatment. Next day I bled him again. In both instances the blood was sizzy. On the morning of the 7th day he had a wildness in his countenance, & a watchfulness which indicated the approach of phrenitis. In a few hours he was furious. I directed cups to the head, applied a large blister between his shoulders, & gave ipecac & calomel. Next morning I had the satisfaction of seeing him perfectly calm & free from fever. His medicines were now discontinued, and light nourishment, in small quantities, was frequently administered. He recovered perfectly.

Mary Luff, a poor unfortunate female who had fallen into habits of drunkenness, soon after a debauch, was attacked with convulsions. On recovering from these, she was seized with pneumonia, & I was then called to visit her. When I saw her, she had very acute pain in the thorax, cough, bitter taste in the mouth, occasional vomiting, & high fever. The

disease, in fact, strongly resembled bilious pleurisy. The lancet was freely used, & calomel was exhibited with a liberal hand. Blisters to the part affected, which were dressed with mercurial ointment; & the usual remedies, as the pectoral mixture, demulcent drinks, &c. were also resorted to. These measures vigorously pursued, had a most happy effect. Ptyalism was induced, & on the 7th day a favourable crisis occurred. And Maggy was eventually restored to health; but I am sorry to say I believe she was not to virtue.

There is another form of pneumonia which I wish you to become acquainted with. It is not uncommon in the spring of the year, for a practitioner to meet with a disease of a mongrel character. Cases of this description I have not unfrequently met with in the latter part of the 5th and beginning of the 6th month. This disease has the inflammatory diathesis of the winter & spring months, diluted, if I may be allowed the expression, with the diseases of warm weather. Sometimes there are intermissions, particularly in the morning; sometimes a better & then a worse day. Thus we have pneumonia connected with something like intermittent fever. In the treatment I have found it safest to keep the pulmonary symptoms principally in view. Bleeding is generally required; blisters to the breast, gentle cathartics, antimonials, &c. Yet bear in mind that we must not evacuate more than is clearly demanded, lest we lay the foundation for subsequent debility, & perhaps a tedious intermittent.

Measles.

My intention, at this time, is to continue the subject of inflammatory affections of the pulmonary organs; & I shall first notice an Epidemic disease which occasionally prevails in our country, & which rarely visits us oftener than once in 3 or 4 years: I mean measles.

This may be viewed very much in the light of an inflammatory catarrhal affection: it is attended with coryza, cough, & a peculiar appearance about the eyes. But in the course of this catarrhal disease, the patient is affected with eruptions which appear on the face & extend pretty generally over the body. Cases of measles are, in general, mild & manageable. But you will find intelligent mothers & nurses not unfrequently very fearful about the consequences that may result from the disease. The complaint, as it has appeared in our city for a number of years past, very generally yields to plain & simple treatment. As it is an inflammatory disease, you can easily comprehend the general principles on which the treatment must be conducted. Severe cases of measles almost invariably require the lancet; & sometimes it is necessary to resort to it again & again. Generally speaking one or two bleedings are sufficient in common cases. In addition to this remedy, attention must be paid to the state of the bowels which should be kept open by purgatives. A free use of diluent drinks; &c, if the cough is severe, pectoral medicines,

with occasional blistering about the thorax & throat constitute the remainder of the treatment.

When this disease, in its progress, affects the trachea, & croup is connected with it, I consider the case as requiring particular care. The last time the measles prevailed, I lost a fine little boy whose wind-pipe became involved; & I had occasion to regret that I did not resort to more early blistering.

I have known the disposition to inflammatory disease not only invade the mucous membrane lining the lungs; but I have seen the same tendency in the mucous membrane lining the alimentary canal. I have witnessed some instances of severe bowel complaints supervening an attack of measles. I have also had one case where vomica supervened, & the patient finally died.

You will occasionally meet with cases of this complaint which depart from the usual course. Thus, in common cases, the eruption seldom appears later than the 3d or 4th day; sometimes earlier: but I have met with instances when the patient has been very ill, though many days had elapsed before the appearance of the eruption. I will read you a case as an example.

Case of Franklin Jones. — 5th mo. 29th, 1808. I was called in the evening to visit the son of Isaac C. Jones, a fine little boy, aged about 14 months. I found him labouring under considerable fever, with a pulse full & tense & some cough. His mother thought his throat was sore. She informed me that he had not been well for several days, particularly

in the morning. But he had never been seriously indisposed until 11 o'clock that morning, when he appeared to have a chill, followed by fever which was accompanied by vomiting. From the history of the case I immediately suspected measles, as they were very prevalent, & especially as they had lately appeared in the family. I directed him to lose 4 oz. of blood & to have a mild cathartic, with a solution of gum arabic in water for his common drink. Next morning he was a little relieved, & in the evening considerably so – his fever having abated. On the morning of the 3d day he was more poorly. Attention was paid to the state of the bowels – they were kept open by senna in decoction. The mild drink was continued. I looked every day for the eruption, & was quite disappointed on the 4th day, as it did not appear. The symptoms became more alarming. His exacerbations of fever were always more alarming in the morning than in the evening; & a disposition to somnolency, which I perceived in the early part of his attack was on the 5th day, greatly increased. It seemed almost impossible to rouse him. His eyes were about half closed; his head was hot, & his feet were cold. He sometimes waked up; & when he did, it was generally with a scream. But still he would take the breast, although his mother remarked that he did so rather with a view to palliate his uneasy feelings, than from a desire to take nourishment. I now prescribed some powders, containing each 2 grains of calomel & 4 of powdered rhubarb, to be taken every hour until

they operated. His stools were green at this time. One of the powders operated sufficiently. I saw him about 3 o'clock, P. M. & finding him still in the comatose state, I felt alarmed & thought of applying blisters. But as the parents had lost a child with hydrocephalus, & were uneasy as to this, I was very desirous of having a consultation. Although the pupils were not dilated, there was no strabismus, & I was aware that coma often attends eruptive fevers, yet I thought he had an aversion to light. Dr. Barton met me on the evening of the 3d of 6th mo. - the 6th day of the child's illness. The pulse was frequent, yet sufficiently full. We soon agreed as to the propriety of applying blisters to the wrists: & although our remedies made some little impression on the disease, yet nothing seemed to have a marked effect, till on the 10th day of his illness he became covered with a fine crop of measles. His comatose symptoms vanished; the eruption continued out about 3 days, & little Franklin, to the great joy of us all, was finally restored to health. - In the course of his illness he had a hard troublesome cough, for which a blister was applied to the breast: but a solution of assafoetida in mint water appeared to give the most relief.

Note. - This boy I attended through an attack of scarlet fever where the same peculiarity relative to the time of the appearance of the eruption occurred. I have since seen several similar cases.

Influenza.

When engaged in practice, you will sometimes be called to treat catarrhal fever as an epidemic disease, under the name of influenza. I will read you a history of the disease, as it occurred in 1807; taken from my notes which I made at the time.

This most extraordinary epidemic seems to have spread in every direction. The first account we received of it in this city, was from New-York about the 8th of 8th month. At that time it was reported that five thousand persons in that city were affected with the disease: About the same time that these reports arrived from N.Y. a few cases appeared in Phil. It soon spread like wild-fire; & by the middle of the month, or a little later, scarcely a family was free from it. In some instances, whole families were affected at the same time, & I think it perfectly safe to conclude that not less than 80.000 of the inhabitants of this city have been more or less affected with it. The adjacent country has not escaped. I have heard of a family in Upper Darby in which 18 persons have been affected with it.

The symptoms of the disease seem worthy of notice; & I shall attempt to give them by describing my own case, for I had a violent attack. For several days previous to my illness, I was sensible of unusual lassitude when I walked or exerted myself much. On the first day of my indisposi-

tion I rose rather earlier than usual. I was soon sensible of an unpleasant feeling in my eyes: it was not pain, but rather a sensation of heat or burning. This was soon propagated to the cheek; & I presently discovered some fever. Professional engagements called me from home; but a pain in the head, back, & limbs convinced me that care for myself was necessary. I returned from visiting my patients, & went to bed about noon. My fever was now high; & a full inspiration produced a sense of raveness, as it is called, in my chest; but I did not cough. In the early part of the afternoon, I lost 12 oz. of blood & took a cathartic. It operated at night, & by drinking largely of barley-water & abstaining from stimulating diet, I felt relieved, & thought myself nearly well on the succeeding day. But I now began to have a copious discharge from the schneiderian membrane, which was soon followed by a cough. This was hard & dry, & rendered it necessary for me to lose 14 oz. of blood. I was relieved by the bleeding: but it was at least 10 days from the time of my attack before I was free from the cough.

In some cases a chill, fever & cough ushered in the disease: in others, pain in the head, back, & bones; & the cough followed a few days after. But I believe that in every case, the breast was more or less affected. It appeared to one that most of the patients had a better & a worse day, as in a tertian. The cough was very troublesome & hard to remove. Mild cases were soon relieved by diluent-

drinks, low diet, & a gentle cathartic of salts or oil. But in some instances, I have found two bleedings necessary to subdue the inflammatory symptoms. In addition to this a large blister was often applied to the chest, & the antimonial powder (without calomel) employed. Under this treatment the most urgent cases would soon yield. As a disposition to the intermitting form of fever was observable, & the bark was contra-indicated on account of the pulmonary affection, I directed cold chamomile & centaury teas, to be taken freely, (after the urgent symptoms were subdued) particularly in the morning.

Although so many thousands were affected; yet it is worthy of observation, that very few instances of death occurred. But has already shown that neglect in the early stage of the complaint has laid the foundation for diseases which will finally prove fatal. Some have already occurred, & one under my own notice.

An intemperate man had been labouring under the disease for 10 days; & during that time had taken his daily allowance of ardent spirits. When I was called he was labouring under very acute pneumonic inflammation, & died in about 5 days.

Others have had hæmoptysis; & the foundation for pulmonary consumption is laid in many persons who are predisposed to that opprobrium medicorum. Several deaths have taken place in consequence of the rupture of blood-vessels in the lungs. The son of my venerable friend, Dr.

Duffield, afforded an instance of this kind. He was a youth of 19. The attack of influenza was mild; but the rupture of a vessel terminated his life in about 48 hours.

Another remarkable circumstance is worthy of record; & that is the unusual number of deaths among persons who had arrived at extreme old age, say between 80 & 90. I presume the influenza has had an agency in the death of most if not all of them. In one week, in this city, no less than six, ~~some~~ between 80 & 90, & one of 107 years, were reported in the bill of mortality. The news-papers from every quarter, give daily information of the departure of this venerable class of the community. In the bill for last week 9 cases of death from influenza were reported; but including the whole number reported from the commencement of the epidemic, I do not think there has been more than 30. From this number the aged persons are understood to be exempt.

I will now read some remarks made on the disease as it occurred in 1805.

11th mo. This Epidemic has again been very general in the city. It commenced as before to the northward & eastward. We heard of it in New-England & in the city of New-York. From the 15th to the 19th of 10th mo. I visited 4 patients with the disease. They were travellers & had passed through N.Y. But as early as the 9th of the month, I had one case of a delicate female who was very ill with it though she had not been absent from the city. About the latter end of the mo.

it began to be general; & in the early part of the 11th month it was at its height. It was remarkable to see with what rapidity it spread. It really seemed as if there were few who escaped. In many families, every individual, I believe, was more or less affected. I suppose that at least $\frac{4}{5}$ of the population were subjected to the disease. During its prevalence I was almost worn out by fatigue; for a considerable number of our most respectable practitioners were confined by it. I heard of one family that sent to 5 physicians in succession & found them all sick. I suppose I made from 50 to 60, & perhaps more, visits in a day; & often prescribed for several patients in one house; so that the number of patients was from 70 to 90.

With respect to the symptoms & treatment, there was a very exact resemblance to the disease as described in 1807. I found some patients to complain most severely of pain across the hips & upper parts of the thighs. Generally one or two bleedings were necessary; in a few cases I bled the patients 4 or 5 times. Some patients, particularly during their paroxysms in the afternoon, had a great sense of fullness, or stuffing in the breast, which was very distressing. The inflammation in some cases, amounted to pleurisy.

Few fatal cases have occurred; & these have been among very aged people, or patients nearly worn out by other diseases. I have not met with an instance of death where the constitution was vigorous. Several cases have come under my care in which after recovery, the patient has

been attacked by a smart chill & fever, generally of a remitting character: in some an intermitting form has appeared. These cases, however, are generally manageable. I am now attending an elderly gentleman in consultation with Dr. Parke, where the fever has run into typhus mitior. Although I suffered a severe attack in 1807; yet the present year, I escaped; at any rate, I have not been laid up. I had a slight soreness of the throat. My worthy friend, Dr. Griffitts, who escaped in 1807, was pretty smartly handled.

Influenza is sometimes very dangerous to persons labouring under previous disease of the lungs, particularly to such as are predisposed to pulmonary consumption & haemoptysis. I have witnessed some melancholy cases of another kind. During the prevalence of the disease in 1815, I attended, with Dr. Mathieu, a young man from New-England who was afflicted with disease of the spleen. He was anxious to return home, being the only child of a widowed mother. But just at this juncture, the influenza took hold of his system, already nearly exhausted, & in a few days he fell a victim to it.

10th. Mo. 1820. – There are a few cases of influenza now in the city. One which is very interesting, is now under the care of Dr. Chapman & myself: A young lady, at a boarding school in this city, was afflicted with autumnal fever, & was attended by Drs. Mongas, Chapman & myself. Her disorder was protracted & dangerous. How-

ever, with great care & attention, we ultimately had the satisfaction of seeing her in a state of complete convalescence. Just at this juncture, when she was able to leave her bed & sit up occasionally, the influenza took hold of her. In her usual health, it would probably not have been severe enough to confine her to her room: but acting on a system previously debilitated, it has rendered her situation the most dangerous that can be imagined. There is great difficulty of breathing, with heaving of the chest, & a pulse often as frequent as 160 in a minute. There has been but one ground of hope; & that is her power of expectoration. She did expectorate freely: but to day we feel an unusual degree of solicitude, because this power is failing. If she should continue any length of time in her present condition, the case must terminate fatally.

Note.– The above prediction was verified – she died.

Diseases of the Heart.

When we contemplate the structure & functions of the heart, we must be aware that every thing connected with its diseases is peculiarly important & interesting. While I make this declaration I am under the necessity of adding the painful information that some of the complaints of this organ are entirely beyond human control. When you rec-

ollect that the heart is the fountain of the circulation & that it is in a state of perpetual action, you can readily understand that this continual motion is very much opposed to the cure of organic diseases of the part.

I shall commence with the more simple & less dangerous forms of disease, & gradually rise to those of higher importance.

Palpitation of the Heart.

Some persons are peculiarly liable to this disease. From slight causes the heart is thrown into most violent convulsive action; the patient is subjected to very considerable inconvenience; he is often greatly alarmed, & sometimes not without cause. Palpitation of the heart seems to depend on a peculiar irritable condition of that organ. Some persons possess naturally a very irritable state of system, highly susceptible to slight impressions; & in them palpitation of the heart is induced by trivial causes. Of these causes, I hardly need mention that fear & other mental emotions have great influence. But this peculiar condition of the heart is also induced by causes more gradual in their operation, & more difficult to be removed than emotions of the mind. Thus anything calculated to debilitate the system may lay the foundation for this complaint. It is an occasional attendant on dyspepsia. Persons subject to this disease sometimes suffer much from palpitation of the heart.

Among the remedies which may be regarded as useful, I have found that tonics & antispasmodics hold an important place. When it depends on a peculiar irritable state of the system, the indication is evidently to counteract this state by remedies of the classes just mentioned, & to give tone to the whole frame. Among the antispasmodics, assafetida & Hoffman's anodyne are most useful. In a case which lately fell under my care, & which was attended by great nervous irritability, I derived great advantage from a combination of these articles. If I recollect right, about ℥ss of assafetida was rubbed down with ℥vj of mint water & ℥iij of Hoffman's anodyne added. Of this the patient took a table spoonful several times a day; & he told me that he derived extraordinary relief from it. I do not, however, intend to enter into particular details of practice, but to give general observations. You will remember then that tonics & antispasmodics are generally useful in palpitation of the heart arising from nervous irritability, or simple weakness of the system.

Syncope.

Passing from simple palpitation of the heart, I go on to consider an opposite state of that organ, a state in which its action, from various causes, is momentarily suspended & syncope, or, as it is commonly called, fainting ensues.

Syncope may be regarded as a temporary death. Sometimes from causes very trivial in their nature, persons will fall into this state; the action of the heart will be for a mo-

ment suspended, & they will lay without sensation or motion. If this were to continue for any length of time, the functions of life would cease forever. But syncope as we generally meet with it, is little to be apprehended. The system speedily rallies, & the patient in a few minutes is restored to his accustomed health. But I here speak of syncope produced by accidental causes, & in persons who previously enjoyed considerable health & vigour. When it occurs in the latter stages of disease, even if induced by causes purely accidental, it is sometimes very dangerous. When the excitability of the system has been reduced by any complaint, & it has thus been rendered less able to rally its forces, it is sometimes completely overpowered by syncope, & reaction never occurs. Hence in some cases of malignant typhus ~~fever~~ fainting is much to be dreaded. I have known a patient, on attempting to walk across the floor, fall down & instantly expire. In nervous fever syncope is sometimes dangerous. You have heard of cases where death has resulted from profuse evacuations. Patients who have been long ill, when under the influence of powerful purging, sometimes die in the act of catharsis. I mention this because an important practical precept may be derived from it:- that in diseases of a low character we should as much as possible economize the strength of the patient, & prevent undue exertion. Hence when the bowels are to be opened, instead of suffering the patient to rise, I insist on his remaining in bed & using the pan.

Syncope in its common form requires little treatment. sometimes laying the head low, sprinkling cold water in the face, & applying volatils to the nose will be sufficient to restore action; & the patient will recover. But if it occurs in patients previously exhausted, more effectual remedies are necessary. The internal administration of volatile alkali, wine, &c. & the external application of sinapisms & other rubefacients will be necessary.

In the course of my practice I have met with some cases which I denominate protracted syncope. These are particularly interesting to the medical practitioner: because as I know from my own experience, there is a possibility of blending them with other forms of disease; & the mistake may prove fatal to the patient. I know no better mode of giving you my ideas upon this subject, than by imparting my own experience. I will therefore relate to you the first case which came under my notice.

Case.— In the early part of my practice I was, one morning, called from my bed to see a woman in Water Street, who, it was said, was extremely ill. I found her in the most imminent danger:— her respiration was distressingly laborious; her countenance was marked with extreme anxiety; her pulse was barely perceptible; & she was under the most fearful apprehensions of immediate dissolution. She entreated me with the utmost earnestness to do something to relieve her. When I cast my eye on the woman my first impression was, that it was a case of suffocated excitement; that the

system was engorged with blood, & was incapable of acting on account of being pressed down by disease. Happily, I did not act on first impressions; but inquired into the history of the case. I found that just before my visit she had been delivered of a child by a midwife, who had just left her. They informed me that she had had an unusually dry labour – the membranes having ruptured some hours before the birth of the child. The consequence was that the system was completely worn out, & had passed into the condition just described. I could not, however, divest myself of the idea of disease of the thorax. But instead of acting, I ran to Dr. Griffitts (who lived in the neighbourhood) & stated the case to him. His advice was nearly in these words: "Pour down the volatile alkali, as much as she can take". I ran back & immediately put the practice into operation. External stimulation by sinapisms, was resorted to, & volatile alkali & other internal stimulants were also employed. A blister was applied to the chest. In a few hours the patient was free from danger.

Now, in this instance, had I acted on the presumption that the case was one of suffocated excitement, it is probable that the heart, already unable to perform its functions, by the loss of a few ounces of blood, would have been put into such a situation, as to have ceased to beat forever.

Case. – Sometime after this case, I saw another bearing some resemblance to it; but not so dangerous. The patient was a young woman who had been attacked soon after

bleeding. It seemed as if the action of the heart had been lowered to a point just sufficient to support life, & no more. In this case there was the same difficulty of breathing; the same expression of anxiety & distress; the same apprehensions of death. By the administration of external & internal stimulants, & by the liberal use of assafoetida, she was restored to health.

In one of the early volumes of the Eclectic Repository you will find detailed several cases bearing some resemblance to those just stated.

Spasm of the Heart.

The heart is subject, in some instances, to a very dangerous form of spasmodic disease. Whether the cause operates primarily on this organ or secondarily through any other part of the body (for example, the stomach,); whether the disease be simple spasm accidentally induced, or depend upon an arthritic condition, in either case, it must be regarded as very dangerous. — Sudden spasm of the heart may depend on gout of the irregular form. Hence gouty patients sometimes die suddenly. The heart may also be affected thro' the medium of the stomach. From some inexplicable cause the stomach & heart are sometimes almost simultaneous affected, in such manner as immediately to extinguish life.

Case. — To illustrate this I will relate the case of Stacy Bispham — He was a young merchant of great respectability

A short time previous to his death, perhaps a week or ten days, he called to consult me about some uneasy sensations in the region of his stomach & chest. Knowing him to be much devoted to the business of his counting house, I advised him to relax a little, & to ride occasionally on horseback. His habits were remarkably sober & temperate. Sometime after this I was called suddenly to see this gentleman: I found that at his counting-house he had been suddenly seized with the uneasy feelings I have alluded to. He had walked home; & just after he entered the parlour he fainted. The family were in great alarm, & I was sent for. When I arrived I found him exactly in the condition of a person just recovering from a fainting fit - his countenance was pale, & his pulse feeble; but he was intelligent, & there was no sign of any affection of the head. I remained for a considerable time, & gave such remedies as were calculated to excite the system. Ether, wine, & the diffusible stimuli were liberally administered: at the same time external irritation was resorted to. The system gradually reacted, & when I left him he was apparently recovered. But feeling uneasy about the case, it being about noon when I first called, I visited him as often as three times before bed time. At my last visit he seemed to have recovered entirely; & I expected no return of the disorder. I directed that he should not go to the counting-house that day, but remain till I should call. In the course of the evening he remarked to one of his friends, that if he had

not recovered, he would have had a very easy death, for he was perfectly free from pain. Next day, previous to my calling, I received this history:- that he felt himself considerably better, got up & walked about the room. He read the news-paper, & had some conversation with his wife in which he informed her that he felt better than at any time before his last attack. He had just taken an egg with a little Madeira wine, & was in the act of eating a cracker, when in a moment, almost in the twinkling of an eye, he dropped dead. The only person that saw him, except his wife, with the last appearance of life, was a servant girl who ran into the room. She said that she heard something like a groan or grasp after she entered. Dr. Physick, who lived next door, & some of the neighbours ran in immediately, but saw no symptom of life. It is probable that a sudden spasm of the heart destroyed him. As soon as I arrived I placed him in a warm bath, inflated his lungs, & treated on the same plan as in cases from drowning. But all was in vain - there was never after a vestige of vitality. I made an examination of the contents of the thorax & stomach; but found every thing perfectly natural. This case may be considered as different in some respects from angina pectoris.

Angina Pectoris.

This is not a common disease. It has occasionally fallen under my observation, but not often. It consists

partly of spasm of the heart; but the spasm is communicated to other parts. A pain in the arm frequently precedes or accompanies the affection of the heart. The attack is brought on by any exertion as ascending a flight of stairs. Patients labouring under angina pectoris are frequently obliged suddenly to stop in the act of exertion, in consequence of the occurrence of this painful spasmodic affection.

You will find that the biographer of Hunter gives a detail of the disease as it affected that distinguished man. It seems, in his case, that the stomach partook largely in it. On the first attack he was sensible of pain about the stomach: soon after this his heart ceased to act, & he seems to have believed that life was maintained merely by his voluntary exertions to expand the chest: but I suspect that these exertions were a consequence of a natural sense of their necessity, rather than a deliberate act of the judgement & the will. You will find that in this case, the disease could be brought on by slight exertions: but it never occurred in its most aggravated form, unless the exertion were conjoined with some violent emotion of the mind. It was in one of those violent paroxysms of rage to which his irritable temper subjected him, that he was seized with that attack which terminated his existence.

I have known angina pectoris to continue several years before the patient died. A widow lady of this city consulted me full five years previous to her death, with

these symptoms:- pain in the arm with palpitation & spasm of the heart were induced by any over exertion; but she pursued her usual avocations; & from her appearance, one would not have been aware of her danger. I was called in consultation to see her. Various expedients were resorted to; but I am inclined to believe that in this complaint there is not much to be done. It appears sometimes to depend on an arthritic condition of the system; & John Hunter used to derive great relief from the occurrence of a gouty paroxysm. One morning the daughter rose & observed her mother in a sweet sleep, as she thought it, went down stairs to prepare for breakfast. But it was the sleep of death. She was lying on her side; & it is probable that while she was in this position, a spasm terminated her existence.

I have nothing to say from my own experience as to the successful treatment of this disease. Dr. Rush thought that occasional bleeding was useful. The French speak of continual blistering with approbation. But my experience is so limited that I can give no decided opinion.

Rheumatism of the Heart.

I shall now call your attention to a disease of the heart which does not frequently occur, & as far as I know, is not often mentioned by practical writers. If I recollect aright, Dr. Pitcairn spoke of the disease to Dr Baily who has given a description of it. You will find an inter-

sting account of a rheumatic affection of the heart in the 1st vol. of the Eclectic Repository, by Dr. Dundas. It has fallen to my lot to see a few cases of this rare disease.

Rheumatism of the heart, so far as my observation goes (& the experience of Dundas is similar,) occurs most commonly in young people. Young persons who have been subject to attacks of inflammatory rheumatism (which is rare in early life) are apt to be affected with this disease. Rheumatism of the heart consists in most violent pulsations of this organ unattended with pain. On laying the hand on the heart of the patient, you are very much struck with the violence of the pulsations, & receive the impression that the heart is of an enormous size. Along with this, you can easily believe that there will be a corresponding morbid derangement of the pulse. This in some cases is very irregular - the stroke being sometimes violent with considerable tension, & at others intermitting. Some of these cases continue for years.

Case of Zilla Jones. — This young lady died, under my care, of rheumatism of the heart; & after her death I had an opportunity of examining the body. She had suffered in early life from inflammatory rheumatism. She was about 21 years old at the time of her death; & the disease which terminated her life was of about 2 years continuance. At times her respiration was laborious, & she could lay with her head low. Towards the latter stage of the complaint, she was troubled with edema of the limbs; & a few days before

her death she was afflicted with acute mania. On dissection I found adhesions on the left side, between the pericardium & the pleura, & universal adhesion between the pericardium & heart. The ventricles were exceedingly enlarged, & the right one was very thin. There was a slight ossification of the valves of the right auricle.

Inflammation of the Heart.

The heart, like other muscles, is subject to inflammation. There is one fact worthy of particular notice – inflammation of those parts (muscles) which are subservient to locomotion, is attended with much pain: but there may be severe inflammation of the heart unaccompanied with pain. I well recollect a case which terminated fatally under the care of Dr. Wistar, at the dissection of which I was present. The whole surface of the heart was covered with a coat of coagulable lymph, as also was the internal surface of the pericardium. I have often heard the Dr. say that the patient did not complain of acute pain, but of a sense of weight & uneasiness under the sternum. It was treated on the same principles as a case of pneumonia; viz. with bleeding, blistering, &c. but without avail.

During the period that I lectured for Dr. Davis, there was brought into the dissecting room & exhibited to the

class an example of this kind: but we had unfortunately no history of the case. The heart & the internal surface of the pericardium were completely covered with a coat of coagulable lymph, which could be peeled off with the fingers, & was of a colour resembling that of rennet whey.

Some years ago, while I was attending on the Alms-House a case occurred of inflammation & suppuration within the pericardium, complicated, however, with an accident. Whether the inflammation of the heart was owing to the injury, or whether it had taken place before it is impossible to decide. I will give you an outline of the case.

Case of Charles Sheppard.— Charles Sheppard, aged 32 years, was admitted into the Alms-House, 6th mo. 16th, 1819, in consequence of an injury about the upper part of his breast. Owing to the discord state of the parts on his admittance, the precise nature of the injury could not be ascertained: but a luxation of the clavicle from the sternum was suspected. Suppuration took place about the upper part of the sternum, accompanied with a weak pulse & general debility. For this wine, porter, & a nourishing diet were directed. Opium was given to relieve pain. A tumour burst in the neck & discharged pus. The patient continued to sink. After a few days he complained of uneasiness & anxiety in the chest, with some cough & a great deal of pain. Before he died he was affected with difficulty of breathing.

On dissection collections of matter were found near

the upper end of the sternum, exterior to the pleura. Adhesions had taken place on the right side between the lungs & pleura, but not on the left. About 3 pints of water were found effused into the cavity of the thorax. The lungs had a healthy appearance. The knife was by accident pushed into the pericardium, & a quantity of pus immediately flowed out. On enlarging the opening, the cavity was found filled with pus, & no less than a quart was taken away. That first obtained was fluid & of a bright yellow colour; but towards the last it was found in coagulated lumps, resembling cheese curds in appearance & consistence. The apex of the heart was towards the sternum & adhered firmly to the pericardium.

I have brought forward these cases to show that within the pericardium we occasionally find not only inflammation with effusion of coagulable lymph, but also the secretion of genuine purulent matter, & that to a very great extent.

Scrofulous Inflammation of the Heart.

Case of Geo. Haydock. – This child had been afflicted almost from its birth. I think I never heard so peculiar a cough in an infant before. A person in an adjoining room might have reasonably concluded that the cough proceeded from a man of 70, instead of an infant of a few weeks. He had also an exomphalos. When about 3 months old I attended thro' a violent attack of pneumonia

which required bleeding & blistering. A blister on the breast produced a most surprising alteration for the better at a time when his case appeared almost hopeless. Although he recovered from the immediate danger of the attack, yet his cough, which he had immediately after birth, still continued. He was at times afflicted most grievously with colic. Such a train of symptoms naturally called for a variety of remedies; & poor George had a great deal done for him during a part of his short stay among us. But nothing seemed to make any favourable & durable impression. He was taken into the country; his cough continued; & from accounts, he occasionally discharged purulent matter. He had also sickness of stomach. A few days before his death, he was seized with convulsions which returned frequently. He was now quite insensible. The day previous to his death I saw him. His pulse was very frequent, & yet possessed some strength. His pupils were very much dilated, & quite insensible to light. From his appearance, & accounts received of his state, as it had been for several days, I was ready to suspect hydrocephalus. He died about 7 o'clock in the evening.

As I was about 4 miles distant, Eden Haydock, the father of the child, kindly informed me of the event, expressing his willingness to allow an examination to be made. Next morning, accompanied by my friend, Dr. Tucker of Burlington, I proceeded to the dissection. On opening the abdomen the mesenteric glands were found to be

closely adhering: but when it was removed, the whole external surface of the ventricles was seen covered with a number of small points or tubercles, of a whitish appearance, which entirely obscured the view of the muscular fibres of the ventricles. But on cutting into them, they appeared natural, as also did the valves & the chordæ tendinæ. The tubercles did not resemble the crust formed during acute inflammation: for this production is like a membrane which can readily peeled off, while the tubercles were immovable, & must have been of scrofulous origin. The child was of a light complexion, having fine flaxen hair.

I once saw a woman dissected at the Alms-House with the same appearance on the surface of the heart. From these cases you perceive that scrofulous disease may affect the heart itself.

In the course of your practice you will be very much at a loss to find diagnostic symptoms between diseases of the heart & hydro-thorax. There is a complaint of this organ which may easily be confounded with dropsy of the chest. I know no better mode of illustrating my meaning than by stating a case which fell under my observation, & which I had an opportunity of examining after death.

Case of Penelope Whitehead. — 2d mo. 1818. The subject of the present notice was a woman of examplary piety

She was the mother of a large family of children, & had passed over the critical period of the cessation of the catamenia, several years before the present attack of disease. She came under my care in the fall of the year 1816, & at that time laboured under diabetis. This disease was preceded & attended by considerable mental anxiety. I plaid her upon a rigid animal diet, which was continued for several weeks, & with the happiest effect; for the disease entirely subsided. But it was only a transient calm; a scene of complicated suffering was about to open. It was not long after the cessation of the diabetes before I was called to her in consequence of dyspnoa which appeard to me to resemble that of hydrothorax: I was the more inclined to suspect the latter disease, as the dyspnoa supervened diabites. At this time she was still, for the most part, living on animal food; & I hoped that by allowing her the free use of fresh vegetable food, I should bring on a return of diabetes, & thus relieve the breast. But I was disappointed; for the urine did not increase as I expected, & the dyspnoa continued & at times was quite distressing. Failing in the object by a return to vegetable diet, I proceded to the use of diuretics; first squill, then squill & calomel. Continuing for some time under this treatment she evidently improved, & on the opening of pleasant weather in the spring, she went to the city of Washington on a visit to one of her friends. While there she experienced several

severe attacks of difficult respiration: but they soon subsided, & she would then enjoy herself considerably. In proof of this I was informed that, while at Washington, she visited the tomb of the great chieftain on the bank of the Potomack. The party went in a boat. They ascended a very high bank, & there was no young person in the company who accomplished it with more ease, & skipped about with more apparent pleasure than our patient. This I considered a very interesting fact; & it produced serious doubts in my mind as to the existence of hydro-thorax, especially when taken in connexion with other circumstances which I propose to notice. Soon after her return from Washington she had a violent attack of dyspnoea, & I saw her. Her respiration was laborious & most distressing. But I was struck with the perfectly natural state of the pulse as it regarded force, frequency, & regularity. By the use of antispasmodics, such as volatile alkali, assafoetida, &c. &c. she was soon relieved; but she was ever after this subject to violent paroxysms which I will now more particularly describe. These paroxysms always commenced with a loss of sleep which was very distressing. During the whole time she complained of being unable to sleep; at least nature would appear to be exhausted, & being fairly worn down, sleep would come to her relief, & the paroxysm would terminate. During these paroxysms she was affected with great acidity of the stomach, & other very prominent dyspeptic symptoms. Great difficulty arose in the treatment at these periods, in consequence of

her inability to use opium in almost any shape. Such was the extreme distress of stomach that followed its use that she generally preferred to suffer from want of sleep than to employ it. Even in the form of injection it affected her unpleasantly. But by applying it in poultices to her hands & feet, & using it largely in a spread plaster applied over the stomach, I thought she was sometimes much relieved. Almost all the antispasmodics were alternately used.

On the solution of a paroxysm she would resume her domestic cares; & I have frequently left her one day almost in a dying state, & the next day, on calling, be informed that she was riding out, or else find her down stairs with the family. She would now lay with her head low in bed, & there was no unusual paucity of urine.

The summer of 1817 had now opened upon her. She had often derived benefit from visits to the sea shore, & was desirous of trying it once more. To this I consented, & she set out for Long Branch. The weather was very hot. She was greatly fatigued on the road, & travelled down during one of her paroxysms, sleeping none at night. On her arrival at the shore, she was nearly exhausted. Her pulse was irregular, her feet swelled, & her dyspnœa distressing. A medical gentleman, who happened to be in the house, was requested to see her. He had not been accustomed to the case, & I was not surprised at his being alarmed. But he pronounced a rather too hasty & positive decision. From a very superficial examination

he decided that it was hydro-thorax without doubt, and advised her immediate removal from the shore. So in a few hours, & in the midst of a most distressing paroxysm she was hurried away. She assured me that the very few hours she was there, the air was reviving to her when it blew from the ocean. With great difficulty she reached Bordentown. Her husband came on to the city & consulted me. I wrote to Dr. Burns, & gave him a statement of the case. She was now placed on the use of the tincture of digitalis, & the alkaline infusion was resorted to for the relief of her dyspeptic symptoms which were very distressing. While she was at Bordentown I paid her one visit. I found her with very considerable anasarcous swelling of the lower extremities. The air of Bordentown seemed to suit her very well. She remained there during the hot weather & returned home in the autumn wonderfully recovered. She was now considered a well woman. She walked about among her friends as usual, attended public worship, & the change was truly a pleasant one. But even this was only a transient calm. In the early part of the winter, she had evident proof that her suffering was about to be renewed. Paroxysms of dyspnoea again occurred. I resorted to digitalis, squill & mercury, blisters to the breast, &c. While the most scrupulous attention was paid to the regulation of her stomach by animal diet & by alkaline medicines. I wished for a consultation, & Dr. Wistar was called. He fully concurred in the use of diuretics, antispasmodics, &c. About

this time I observed that her paroxysms returned at shorter intervals & between the periods she evidently suffered more inconvenience than she had formerly done. The dyspeptic symptoms were distressing, & her debility was gradually increasing. Paucity of urine was more evident than it had been. She found it more difficult to lay with her head low, & sometimes her pulse was irregular. Her lower extremities were anasarcous. Another change is worthy of remark: erratic, & as I supposed, arthritic pains were evident; & in several of her paroxysms I observed that she had considerable pain in the stomach & bowels. When this was the case, the dyspnoea was less severe; & this led to the supposition that arthritis had a considerable influence in the symptoms.

There was now an evident exasperation of the symptoms in her paroxysms, & the intervals were very short. For several weeks before her death, Dr. Wistar & myself expected every hour would be her last. One day I had to leave her & go to the Alms-House: but Dr. Wistar remained for a long time, & by the use of sinapisms, spirit brandy, volatils, &c. she revived, although her nails were livid, & her breathing extremely laborious. When the state of the stomach would allow, we generally resorted to diuretics, often of the milder kind, as scabius, juniper berries, &c.; & with respect to the diet, we allowed her to take vegetable food or any other kind that was agreeable to the stomach. About this stage of the case my beloved friend, Dr. Wistar, was taken ill, & died. In one of the last consultations we had in her case, he mentioned

the great importance of examining all those cases, after death, & stated that a gentleman had died as was supposed, of hydro-thorax; but on examination it proved to be a disease of the heart. The first visit I paid my patient after the death of my medical father, the afflicted lady clasped her feeble hands, & raising her eyes in a devotional manner, exclaimed, "Who would have thought that Dr. Wistar would have gone before me!" But the period was now approaching when she was to be released; not, however, without much suffering: for at times she experienced great pain which would suddenly shift from place to place. Sometimes it would be very violent in some muscular part; then her breathing would be more easy & the pain in the abdominal cavity relieved. But when it left the muscles her distress was always increased, either in the thorax or abdomen. Her anasarcous symptoms were distressing, & punctures were resorted to. During violent pain we were compelled to use laudanum. The sickness following its employment was less than had formerly been the case. While Dr. Wistar attended her we observed that she sometimes discharged a little blood in the mucous she expectorated. It was now more considerable, but did not come up in large quantities, as in the case of a sudden rupture of a vessel. But I ought not to omit mentioning that the disposition to urinate pain was manifested in the neck of the bladder, & produced such distressing ischuria that I was afraid the catheter would be necessary. For the last two days of her life, she was at times

in a state of agony, & she referred her pain principally to her bowels; & although opiates were used freely, yet the pain continued almost almost to the last moment of existence. She died on the first day of the 2d mo. 1818.

On the morning of the 4th, my friend Dr. J. J. Hewson accompanied & assisted me in the examination. On opening the thorax there was no appearance of dropsy of the chest, or unnatural effusion within the pericardium. A small & apparently old adhesion existed between the right lung & pleura near its lower part. The heart, particularly the ventricles, was much enlarged, & a slight ossification of the valves on the left side was found. On laying open the abdomen, the liver was found much enlarged & diseased, & the small intestines exhibited evident proof of recent inflammation. They were of a dark red colour, & a small quantity of lymph had recently been effused. Some serum was found in the abdominal cavity.

Affections of the Heart deemed Incurable.

I will now proceed to consider some organic affections of the heart, which, so far as I know, are entirely beyond our control. Hitherto I have spoken of cases which though dangerous yet present to the physician some faint hope that he may be useful. But the diseases which I am now about to describe, arising sometimes from accident, sometimes without any assignable cause, are totally without our power to remedy. As an

instance in which accident had a considerable influence in producing the disease, I will relate the

case of William Hunter. — He was a young man, by trade a bricklayer. I was called to see him about the middle of the 4th mo. 1808. He complained of cough & difficulty of breathing, which greatly increased by any sudden exertion. His countenance was generally pallid; but sometimes it had a hectic blush. He was not emaciated. His feet were slightly œdematous. On hearing his statement, I was induced to suspect phthisis pulmonalis, & requested him to show me some of the matter which he expectorated. I found it was not purulent. The first time I felt his pulse, I was very much struck with its peculiarity — it intermitted after every 2d or 3d stroke, & imparted an indescribable sensation to the fingers. As the lungs did not appear to be ulcerated, I was led to examine in order to ascertain the state of the heart. No sooner did I lay my hand on the left side, than I was instantly convinced the disease of my patient was seated in the heart, or the great vessels in its vicinity. That there was a monstrous enlargement of the fountain of circulation, was plain beyond a doubt in my mind. Its motion seemed strong, but extremely laborious. On asking the patient how long he had been sensible of this great beating of his heart, he said it was about 2 years; that he first observed it after a very heavy lift which strained him considerably. He informed me that it seemed at times as if his heart would beat through his breast.

The case seemed to admit of no remedy, & palliatives were

all that appeared to me to be indicated. With this view I prescribed a pectoral mixture for his cough, & candidly gave an opinion to his friends that it was out of my power to do any thing for his effectual relief. I continued to visit him occasionally for about 2 weeks. Three or four days before his death, his appetite was impaired, & he appeared rather more feeble, though he was not confined to his room. One morning I was sent for, & informed on my arrival, that the night previous he had been attacked with a violent pain in his right side, for which he had lost about 8 oz. of blood. As the pain was still severe, I advised the application of a blister over the part affected. This had the desired effect; for, on visiting him at night, I found him quite free from pain. His pulse possessed the same peculiarities, but was rather more feeble, & he was sweating profusely. During the night, or rather about 3 o'clock in the morning, while in the act of receiving a drink from his sister, he suddenly expired.

On examining the thorax about 20 hours after death, in the presence of Drs. James, Fairlamb, & Clark, I found the lungs perfectly natural in appearance, without adhesions or tubercles. The pericardium contained about 8 oz. of water, which, when taken away presented an appearance novel & highly interesting. The auricles of the heart were enlarged beyond conception; the superior & inferior cavæ were also greatly enlarged. The arteries were perfectly natural. From these appearances we could not hesitate

to pronounce it a varicose state of the venous system in the vicinity of the heart, as well as an enlargement of the auricles of the heart.

I am now about to state anoth case which may be denominated

Apoplexy of the Heart.

& from the best information I could gather, I am strongly inclined to believe, that the interposition of proper practice, some hours previous to the occurrence of this condition, might have saved the life of the patient. It is the

Case of Sarah Ashton. — The patient was about 50 years of age, short, of a full habit, & at that time of life when diseases from plethora are to be expected. Previous to this attack I attended her with common catarrh. My attendance continued from the 12th to the 20th of the 3d month, 1812. I left her improved, if not entirely well. Six days afterward I received the following account: On the day she was afflicted with the illness I am about to describe, she was sensible thro' the day of a violent beating at the heart, with a sense of fullness about the chest. In the course of the afternoon she went into the garden to superintend some of the operations that were going on there, when she was suddenly taken with a severe chill, followed by most distressing dyspnoea; & she became extremely ill. I was sent for & soon saw her. Her respiration was extremely laborious. As soon as I laid my hand on her pulse, I was struck with a remarkable deviation from the natural condition: there were frequent pauses or

intermissions, & then a quick stroke would follow, which was at one time feeble, at another strong. Throughout the disease, she was totally unable to lie in a horizontal posture. Dr. Griffitts attended her with me. A variety of practice was resorted to. She lived till the 12th of the 4th mo. No benefit was derived from what was done for her, except some transient relief from the use of antispasmodics. Towards the latter period of the complaint the extremities became edematous.

On examination after death, the heart was found to be the seat of this distressing disease. A slight adhesion was found between the left lung & the pleura costalis, in a small spot. In the inferior & posterior part of both lungs, there was an effusion of bloody serum. The pericardium contained about 6 drachms of bloody coloured serum. The ventricles were enlarged & altered in their structure. There appeared to be an effusion of blood among the muscular fibres; & their cohesion was so much weakened that they were readily torn asunder. The aorta was enlarged to twice or thrice its natural diameter, & the enlargement extended beyond its curve. The pulmonary artery was enlarged nearly in a corresponding proportion. The coats of both were very thin, & the application of little force to the aorta caused it to tear. The valves of the heart were natural, except a slight ossification of one of the mitral valves.

In this case, as the altered state of the pulse was coeval with the attack, I infer that there was a sudden rush of

blood to the heart & lungs, which caused an effusion into the latter, & a great distension of the former — producing in fact, an aneurism of the heart & aorta. If the distension had proceeded a little further, the consequence must have been immediate death. Had the patient been aware of the impending danger, & had a physician been consulted previous to the occurrence of disorganization, it is altogether probable that copious bleeding might have rescued her from the disease which so painfully terminated her life.

The state of the aorta explains the irregularity of the pulse. For it appears that several pulsations of the heart must have been requisite in order to throw sufficient blood into that vessel to induce it to act on its contents, & thus to propel the volume of blood forwards to the remote parts of the system. While this process was going on, the pauses in the pulse must have taken place.

This, then, I consider an interesting case. If I were again called to any case, & should find, in a plethoric subject, violent action of the heart, continuing for several hours, & differing from common palpitation which, like spasm, comes on speedily & speedily ceases, I should certainly think it right to relieve the blood vessels by bleeding as soon as possible.

I once attended a woman by the name of Hoffner who died of aneurism of the aorta. In her case the disease was induced suddenly, & came on during a catarrhal attack.

You will find many observations on diseases of the heart in several practical works. Corvisart, a celebrated French physician, has written a work especially on diseases of the heart. So far as I can gather, his practice is merely palliative. He speaks of continued blistering as one of the plans most likely to afford relief. Dr. Warren of Boston has also written an essay on the diseases of the heart, & describes several cases, among which is that of the governor of Massachusetts.

Corvisart speaks of percussion as one of the methods of deciding on the nature of diseases within the thorax. I have not, however, much confidence in the plan.

Sometimes a practitioner is agreeably disappointed. He meets, or supposes he meets, with a case entirely beyond his control, & afterwards has the pleasure of perceiving that he was mistaken in his calculations. A case fell under the care of Dr. Wistar, which he was in the habit of relating to his pupils. A man applied to him, labouring, as he thought, under disease of the heart. It so happened that the Dr. in his inquiries into the case, either took up the idea that it might be hydro-thorax; or considering that the use of Squill & calomel would be of no disservice, thought it proper to try this remedy before giving the patient up. He was surprised to find that the patient improved under its use, till at length all the violent symptoms disappeared, & a perfect cure was effected. The disease might possibly have been dropsy of the pericardium.

This then distended rises above the great vessels, and might easily have given to the doctor the idea of an enlarged heart.

The French physicians speak of cures of organic affections of the heart or large vessels, particularly of aneurism of the aorta. Their plan of treatment is one I have never put into practice, & I am not prepared to say that I shall adopt it, till further experience shall have proved its efficacy. The plan proposed is to bleed the patient almost to death, & by repeated bleedings to keep his as low as possible without destroying life. They say that in this way, by unloading the vessels & taking off all distension, they gradually contract till they are restored to their natural diameter. This is their mode of treating enlarged vessels in the vicinity of the heart. I think it proper to state the practice to you; though in the present state of experience I am not prepared to adopt it.

Hydro-thorax.

This disease is commonly known by the name of dropsy of the chest; & consists in an effusion of serum within the cavity of the pleura. It is much more common than idiopathic affections of the heart. We meet with it oftener in advanced than in early life: but it is not altogether confined to old age — sometimes we meet with

it in middle aged, & even in young people. But it must be regarded as a rare occurrence in the early period of life.

You will not unfrequently meet with persons in advanced life, who until a short period before an attack of hydro-thorax, or rather of those symptoms which may be regarded as preludes of the disease, may have enjoyed tolerable health. But when you meet with an old person who is beginning to break fast, in other words loses a good deal of his vigour; whose countenance from a florid colour becomes pallid, you may fairly suspect that such a man is about to be visited with hydro-thorax.

This disease is generally attended with a train of symptoms well understood by intelligent practitioners. A patient such as I have described, finds that any effort at muscular exertion speedily fatigues him, & brings on a disposition to pant. If, for example, he attempts to ascend a flight of stairs or an elevated piece of ground suddenly, some shortness of breath comes on, & admonishes him that he must be sparing in his exertions. About this time the urine secreted is small in quantity & high coloured; & the patient feels the necessity of having one or two additional pillows at night. He is unable without considerable difficulty to lay with his head as low as usual; he is also subject to palpitations of the heart, which sometimes occasion great distress. The practitioner will discover, in a large

proportion of cases an irregular state of the circulation. Frequent pauses or intermissions in the pulse will be observed, & in some instances an unusual degree of firmness or tension in the stroke: Perhaps there will be some cough: but this is not necessarily characteristic. As the disease advances, œdematous limbs make their appearance; & it is very common for patients with this disease to have anasarcous swellings. Some patients, moreover, are sensible, in turning about in bed, in rising up, or in lying down, of the motion of a fluid in the cavity of the thorax. In some instances I have known dyspeptic symptoms to occur; & patients labouring under hydrothorax suffer a very distressing aggravation of their symptoms, if they make use of food which disagrees with the stomach.

This disease is sometimes of long continuance. But there is one circumstance attendant on it, of which you should be aware: I allude to a disposition in the disease, from some unknown cause to terminate very suddenly & most unexpectedly. Nothing is more common than for a patient in hydro-thorax to die <u>instanter</u>, while engaged in his usual avocations. In the course of my practice, I have met with repeated instances of its sudden termination. I knew two respectable elderly women to die at a time when no one supposed them in immediate danger. One of them, was at tea when she died. I could state several other instances; but these are sufficient.

Occasionally we see the patient worn out in a gradual way; & he then suffers extremely from the most distressing dyspnoea.

I have stated that patients with hydro-thorax are unable to lie with their heads low: but one case fell under my observation in the Alms House, which was an exception to this rule. In this instance the patient could lie with his head low. From this circumstance I was disposed to think that the disease might be asthma: but dissection proved it to be hydro-thorax, & there was an unusual quantity of serum in the cavity.

Another case fell under my notice which was examined after death by Dr. Price. It was the following:

3d mo. 28th, 1821. Attended a dissection made by Dr. William Price in the case of a young man by trade a shoemaker. I saw him twice a few days before his death. I suspected hydro-thorax. He had been a long time affected with dyspnoea; but it was remarkable that he could lay with his head low. The pericardium contained at least a quart of whey-coloured, offensive fluid. The heart was quite small, & covered entirely with a purulent coloured soft matter; seemingly a mixture of pus & lymph. The internal surface of the pericardium was lined with the same. Both sides of the thorax contained a large quantity of fluid. The lungs were natural. The stomach contained an hour-glass-contraction which appeared to have been of some duration. The pancreas were indurated.

In the cavity of the pelvis were found several ounces of yellow gelatinous matter which appeared to be lymph.

I once lost a patient in my hospital practice whose thorax was full of water, & who could lay with his head low, as in the above cases. – It is unusual for patients labouring under hydro-thorax to be able to lie with their heads low: I suspect it occurs most frequently when the thorax is full of fluid; & that under such circumstances, change of position will produce less effect.

Having given this general description of the disease, it is now proper to consider the treatment. And here, at the threshold of this part of the subject, I have to announce the melancholy truth, that in old people so far as my experience has gone, the complaint is incurable. The patient may be greatly relieved from his sufferings, & his life may be protracted, but I believe he can never be cured. As I shall state hereafter persons early in life, or even of middle age, may sometimes get well. The principle remedies are diuretics. It seems, in the management of this disease, as if every thing depends on our being able to bring on a very free flow of urine. If you fail in attaining this object, your failure will be truly serious. In practice you will find that some patients are more susceptible than others to the action of diuretics, & in them the chance of affording relief is much greater.

In as much as hydro-thorax is not to be regarded as a disease of inflammation, I believe it seldom happens that a resort to the lancet will be attended with great benefit. In some instances when there is a good deal of strength in the patient, occasional bleeding will afford some transient relief. There is a great variety of remedies resorted to in this complaint. I shall consider several of the most prominent, & give my opinion of others as I pass along.

I once saw a case of hydro-thorax in a middle aged man, under the care of Dr. Wistar, which really appeared to be cured, (at least for several years,) by digitalis, after mercury & squill had failed. Digitalis was used with diligence for some time till it produced a marked effect on the system. But although this medicine is extensively resorted to by practitioners, in hydro-thorax, yet my experience has not been strong in its favour. I have often used it as a change with other articles. – I once saw a case in the Alms-House which appeared to be successfully treated by the use of cream of tartar & gamboge.

But no remedy in my hands has been equal to the calomel & squill. I think I can enumerate, in my practice 3 cases of recovery from well formed hydro-thorax when squill & calomel were the principle remedies which were employed. But neither of these patients was far advanced in life: they were about the middle age. I lately had an opportunity of seeing one of them, after a lapse of 7 or 8 years. I met him in the street, & I can assure

you I quoted him with great pleasure. He informed me that he remained free from disease. Calomel was used in these cases in small quantities, so as just to affect the mouth. The plan I generally adopt in the exhibition of squill & calomel is the following: I begin with one grain of calomel three times a day: at the same time I give one grain of squill three times a day. But as it is the object to increase the squill as far as the stomach & bowels will bear, without at the same time, increasing the calomel, I easily accomplish this by giving the two medicines separately. I go on augmenting the dose of the squill till it affects the stomach & bowels. If I can get as high as 6 or 8 grains a day, so much the better: but if the squill is good, the stomach will seldom bear so much. This plan is pursued till a free diuresis comes on, or till the system is affected by the mercury. If the mercurial action is induced I lay aside the calomel, but still continue the squill. At the same time that these medicines are employed, a number of diuretic drinks may be interposed with advantage. Among these, as a pleasant beverage, & possessing certainly diuretic properties, is an infusion of juniper berries. ℥j of the berries, bruised, are to be infused in a pint of boiling water, & used ad libitum. Parsley, water-melon seeds, scabrius, hornmint, may all be employed. It is proper to change from one to the other to suit the nature of the case, or the taste of the patient.

In addition to the squill & calomel, I have lately met with a case in which very considerable relief was produced

by the steady use of nitrate of potash. This I would advise to be taken gradually till the dose is increased to as much as the stomach & bowels will bear. From one to two drachms may be given daily, in divided doses, and dissolved in pleasant drinks. In the instance alluded to the patient was an elderly gentleman under the care of Dr. Pamer & myself. By persisting in the use of nitre combined with various diuretic drinks, we brought on a very copious flow of limpid urine. (The limpid appearance of the urine is one of the best tests of diuresis.) The patient in consequence became much better. But as he is an old man, I have no idea that he will ever get entirely well. In this case there was a great deal of oedema, which distended the limbs exceedingly, & mounted up the abdomen, & took possession of the penis & scrotum. (In cases of anasarcous swellings, we frequently find the penis & scrotum enormously enlarged.) He was greatly relieved by small punctures made with a very sharp lancet, about the feet & legs. It was formerly the custom to scarify the lower extremities with the view of drawing off the fluid more rapidly; but I must warn you against this practice. Nothing is more dangerous to the patient; as inflammation & troublesome suppuration, if not gangrene, would very probably come on. But punctures with a very sharp lancet, made so as just to penetrate the skin are generally safe, & often yield very great advantage. But even with all the care that can be taken

I have known inflammation to take place around the punctures. In this case, a great quantity of water ran off thro. the punctures; so much that in a few hours the patient was surrounded with a puddle & his clothes became so wet that it was necessary to change them frequently.

In cases of anasarcous swellings it would be highly improper to apply blisters as they are apt to induce gangrene.

Patients labouring under hydro-thorax, if their extremities are anasarcous, should always be subjected to certain cautions. They should be warned against approaching too near a fire. Inattention to this caution, in cases when the circulation in the surface is very feeble has been productive of serious consequences – I have known mortification to result in several instances. They should also be advised every thing like sudden exertion. All their movements should be made with care. They should never attempt to ascend stairs or elevated ground suddenly. For this kind of exertion is apt to bring on dyspnoea & palpitation of the heart, & endanger that speedy termination in death, so frequent in this disease. A patient in this situation, however, will bear riding in a carriage, or even on horse-back with very great advantage, while muscular exertion would be very hazardous. Dr. Wistar was strongly impressed with this opinion; & supposing himself to labour under the disease, used to spend a great deal of time, during the summer, in riding on horseback, or in a carriage: & I have heard

him say that he had never known a case in which injury resulted from such a practice.

The bowels should not be allowed to become costive, but the diuretic medicines which are administered generally have the effect of keeping them free.

With respect to diet, it must be regulated by circumstances. Some patients bear very well a diet of plain solid food, especially if there are dyspeptic symptoms, it is advisable to resort to that kind of aliment which is most acceptible to the stomach. Dyspepsia very much aggravates dyspnoea & suffering in the disease.

There is another remedy to which I wish to call your attention, before leaving this part of the subject. I have certainly seen it very useful in the case of a middle aged person who applied to me. It is an infusion of ginger, horseradish, mustard seed, juniper berries, & (if it can be obtained) parsley root, in cider. This is in fact, forming in cider a tincture of these articles. With respect to the precise quantity I am not very particular. The cider should be old & sound, & free from adulteration. The common sweet cider, which is frequently adulterated with honey, is altogether unfit for the purpose. This tincture may be taken in the dose of a wine glassful four times a day; & at the same time the juniper berry tea with the sweet spirits of nitre may be used as a drink. A tea spoonful of the Sp. Nit. dulc. may be taken in a tea cupful of the infusion three or four times a day.

Hydro-thorax is not unfrequently complicated with gout; & when these two are blended, even in a young person, the case must be considered as exceedingly difficult of management. As a complicated case of disease, I know no better place than this, to introduce the following. The patient was a friend of mine, & was engaged in the lead business.

Case of Eden Haydock. — Eden Haydock was a most industrious & temperate man. He was by trade a plumber, & the poison of lead soon began to manifest itself in his system. (See his case detailed under the head of colica pictonum, p. 240) He also possessed a strong hereditary tendency to gout, and suffered greatly with this disease from early life. It was often irregular, generally affecting his head, for which he was frequently cupped. At one time his kidneys were affected, and I thought urea would relieved him. I once saw him labouring under a violent attack of croup which I had good reason to believe was nothing more than gout in the larynx. He had several fits of regular gout, which I greatly preferred to any other form. — In his case we have a clear evidence that a life of great industry & temperance will not always counteract a strong hereditary tendency to gout.

But with all his bodily maladies it was really matter of surprise to see how he would exert himself, & how quickly after being extremely ill, he would again engage most industriously in his business.

In the course of the summer of 1818, he suffered severe-

ly with dyspepsia, & moderately with diabetes. In addition to these he had something like gutta serena. His sight failed considerably & his nervous system was very much affected. He had great tremours & frequent spasms or jerks.

Finding himself unable to pursue his business, he took a journey to Ballston, Saratoga, & the sea shore; but returned without material benefit. Not only did dyspepsia & nervous twitchings harrass him continually; but in addition to these, anasarcous swellings of his legs & dyspnœa made their appearance; giving some reason to suspect effusion into the thorax, or some disease of the heart, as he had frequent palpitations. But his afflictions did not end here; irregular gout often harrassed him; & I was in continual fear that striking suddenly on some vital part, it would extinguish life in a moment. These fears were nearly realized; for one day in coming out of the water closet, after having had an operation from the bowels, he was suddenly attacked with what appeared to be apoplexy. From information it appears that insensibility was complete, & respiration so stertorous that he could be heard down stairs. My friend, Dr. Griffitts happened to be near the house at the time, & was called in at a most critical moment. He bled Edw freely, & the symptoms abated. I was sent for & saw him with Dr. Griffitts that ~~mo~~ evening. We bled him again blistered his head, &c. He recovered from this attack, & with our advice, went on a visit to his father-in-law's at Mount Holly. There he became worse, & soon returned.

He was now attended by Drs. Park, Griffitts & myself, also by his brother Dr. Haydock. We tried several plans, but without effect. His constitution was completely broken up. The last few days of his life, he really appeared to have some return of his old complaint, constipation. His strength failed & he died.

Dr. Horner, at my request, examined the body, & found a considerable effusion of serum in the left side of the thorax. The pericardium was largely distended with water. The brain was perfectly natural. The colon was found to have a stricture, that was probably of long standing. The bowel was thickened for the space of about an inch in width, & this thickness encircled the whole gut.

I have read this as a case of complicated character, where gout & hydro-thorax were blended together, & the powers of lead broke down the constitution, & reduced the system to the condition you have heard described.

A similar case fell under the care of Drs. Hartshorne, Wistar, & myself, which I believe to have been hydro-thorax accompanied by symptoms which I shall notice.

Case of James Lee, Esq. — The subject of this case was in the prime of life, a remarkably stout built man, accustomed to use a great deal of exercise, & to take stimulant, freely. One of the striking features of his disease was an extremely irregular action of the heart. The pauses in the pulse were long & frequent; & during sleep & about the time of dropping to sleep, he was singularly distressed & moaned very much. He

He ascribed this distress to a fear of being unable to breathe if he was not constantly on the watch; & said he often felt as if it was necessary to make voluntary exertions to breathe. We kept him upon plain & rather low diet; & cut off the use of all stimulants. We used the squill; & he took, I believe, some laudanum at night. Under this plan he improved surprisingly. His pulse became quite regular, and he seemed well. He went to Burlington on business for a few days. Here he departed from the plan of living prescribed, & returned with his pulse in the same state as before. He was again relieved; & when he set out for home (Port Elizabeth, N.J.) we recommended a life of strict temperance, as the only possible plan of preserving his health.

About a year afterward he consulted me in consequence of a return of the disease. He had lived temperately for a considerable time: but on a sleighing party was induced to give in to his old habits, & the complaint returned.

Here it is proper for me to state that I have seen the complaint quite early in life in consequence of indulgence in intemperance. Not long since I saw a man about 30 years of age, who laboured under hydro-thorax. Unhappily for him, it could be traced to the intemperate use of ardent spirits. He died instantly while taking a walk.

One of the patients, owed his complaint to intemperance. Another of them, who was a man not beyond the middle age, was attacked with hydro-thorax after pneumonia. This patient got well under the use of squill & calomel.

Before closing the subject I must again call your attention to the importance of the diuretic treatment in this disease. I must also mention as palliatives cups & blisters. Temperance in living is very important. But as regards the permanent cure of hydro-thorax, diuretics must be principally relied on. Mercury has considerable influence in preparing the system for the use of diuretics: but remember that to bring on a copious flow of urine is your object in this disease.

To give you an idea of the importance in which diuretics were held by the celebrated Fothergill, I will state an anecdote which I used to hear related by Dr. Wistar. Humphrey Marshall, a botanist of some note in Chester Co. Penn. for a long time maintained a correspondence with Dr. Fothergill of London. – I think I have heard it said that Dr. F. in his zeal to promote science in America, assisted him with his purse. This gentleman stated to Dr. Wistar that Dr. F. hardly ever wrote to him without impressing on him the importance of discovering some certain & powerful diuretic. Now Dr. F. was a man of extensive experience, & felt, as every other experienced practitioner must, the importance of diuretics in the treatment of dropsy.

It now remains for me to inform you that in practice you will often feel embarrassed in deciding on cases of hydro-thorax. As I have shown in the case of Penelope Whitehead, you may have an assemblage of most of the symptoms attending the effusion of serum into the cavi-

ties of the chest, without any effusion existing at the time. You will recollect that she was subject to distressing dyspnoea, & that there was a train of symptoms very severe & ultimately fatal: & yet dissection proved that the complaint was not hydro-thorax; but that all the symptoms arose from disease of the heart. In this as well as in all other cases which I shall mention, the operation of diuretics did not procure the relief which might have been expected. The paroxysms of dyspnoea were more transient than they usually are in hydrothorax: at one time she would seem to be brought to the very brink of the grave, & the next day she would be down stairs engaged, as the mistress of a large family, in domestic avocations.

A truly respectable physician & excellent man, Dr I. Stokes, of Moorstown, N.J. fell a victim to ~~the~~ a disease which was generally thought to have been hydro-thorax: though I was of a different opinion. Unfortunately, I had not an opportunity of ascertaining its real nature by dissection. He was subject, like Penelope Whitehead, to most distressing spells of dyspnoea, & at the same time was acted on very freely by diuretics. He had none of that marked diminution of urine so observable in hydro-thorax; nor did diuresis produce that relief which it usually does in the disease. He could also lie with his head low; but this, as I before mentioned, is not to be depended upon as a certain diagnostic. However, several weeks before his death, a tumour was distinctly perceived through the integuments of the ab-

domen. His legs were much swelled; & I was induced to believe that this affection arose from the tumour just mentioned, on the veins & lymphatics of the abdomen. The occurrence of this tumour, in connexion with the fact that the action of the kidneys was natural, & that considerable diuresis could be produced without yielding relief, led me to believe that it was not hydro-thorax of which he died.

Another case fell under the care of Dr. Griffitts & myself, which, in some respects, bore a strong resemblance to hydro-thorax; but I had good reason to believe that all the symptoms depended on inordinate obesity. In addition to this the patient was subject to gout. It was the

Case of John C. Wells. — This case terminated fatally; & I believe was occasioned principally by mechanical impediment to respiration, in consequence of a morbid accumulation of fat. The patient was really a burthen to himself. For a long time he was unable to lie down in bed; but generally reclined on a sofa or sat in a chair. His wife informed me that for the last two years, he had frequently been in the habit of sleeping whole nights in his chair in the parlour. Along with obesity he suffered greatly with gout. In consequence of sitting constantly, the pressure on his seat & the back part of his thighs was such as to produce an impediment to the circulation, & in this way cause the most distressing anasarcous swellings of the lower extremities, accompanied with a discoloured state of the skin which really threatened gangrene. Vesications actually did occur,

& produced superficial ulceration. There was a great disposition to somnolency, & the mental faculties of the patient were evidently impaired. Dr. Griffitts saw him with me occasionally. At first, for the relief of his respiration and stupor, bleeding & cupping were employed together with blisters to the breast; all without any material benefit. Soon after this a copious expectoration of matter which really appeared to be purulent took place. But still the difficulty of breathing continued, & when he coughed he seemed almost in a state of strangulation. His countenance became of a dark purple colour. We tried him with calomel & squill, which caused a flow of urine in cataracts (as he expressed it;) but all to no purpose. A mechanical impediment bid defiance to every thing. We were obliged to use tonics. He continued to ride out occasionally until the day preceding his death. He was found dead in his bed. It is probable he died in a paroxysm of coughing. The rapid advancement of putrefaction after death was beyond almost any parallel. I was informed by a person who attended the funeral, that the stench in the house was almost insupportable. They were obliged to lash the coffin with ropes to keep it from bursting. Even the sexton told me he was found to vomit.

A few years since a man named Dixon, extremely corpulent, & disposed in the same way to somnolency, was found dead in his bed.

You will perceive by the cases I have stated, that I lay great stress on determining between hydro-thorax, and

diseases resembling it, upon the action of the kidneys. In some cases where dyspnoea has formed a prominent symptom, there is a free & natural discharge of urine: in other cases, where the fact may be doubtful, diuretics will operate profusely, & yet procure no relief. When you meet with instances of this kind, you may consider them as not hydro-thorax.

Some practical writers have proposed tapping in cases of hydro-thorax. I have never seen the practice tried, & for my own part, have no particular desire to try it. It is always attended with some hazzard, & the result is very doubtful. In a case of dropsy which occurred in Virginia, an attempt was made to tap the thorax: but the complaint proved to be dropsy of the pericardium. This membrane was punctured & the water evacuated; but the patient died almost immediately.

Diseases of the Head

Hydrocephalus.

This disease as it name implies consists in an effusion of serous fluid into the ventricles of the brain; & in common language is denominated dropsy of the brain. I regard hydrocephalus as a primary affection of the brain; or in other words an

idiopathic disease of this part. That the brain may be brought into sympathy with various parts of the body is a fact which I will most readily admit. I propose in fact, in the course of my observations, to make some remarks on the sympathies of the brain. But I wish you distinctly to understand that I consider real hydrocephalus an idiopathic affection.

Hydrocephalus is very frequently found to be an hereditary disease. I presume that there are very few physicians in extensive practice who have not been called upon to see children in the same family labouring under the complaint. The knowledge of this fact is surely important; because in families where this constitutional predisposition is known to prevail, the physician is more on the alert, & is disposed to regard every complaint of the head, however slight may be the appearances as serious enough to require very close attention.

Hydrocephalus when fairly formed is very generally fatal; & when I hear of its being frequently treated with success, I am much inclined to suppose that the gentlemen who give these reports are mistaken as to the character of the complaint; for some diseases which are very manageable bear a close resemblance to this.

Dissections show effusions of serous matter into the cavities of the brain. In some the quantity is very considerable, amounting to half a pint; in others it is very small, down as low as one ounce, or even less. From observing the similarity of symptoms in cases which have proved fatal, & also the dissimilarity in the quantity of effused fluid, as manifested by disse-

tion, I have been led to conclude that there may be, & often is, a fatal, & if I may be allowed the expression, an hydrocephalic action going on in the brain, without the effects of this action being very strikingly displayed by ~~diseases~~ effusion. Because, whether there is a considerable quantity of water in the brain, or only a very small quantity, the same order of symptoms occurs, especially in the latter stage.

You will find in practical writers various causes assigned for this disease. I shall not undertake at present to enumerate all. But I will briefly remark that constitutional predisposition is to be regarded in a very serious light; & that any causes that are calculated to interrupt or disturb the healthy functions of the brain, occurring in an individual with this constitutional predisposition, may excite the fatal action & evolve the disease of which we are now about to treat.

Among the most prominent causes assigned for this disease by practitioners in general, are blows on the head. Now, conformably to the view I have just taken, I can easily conceive that a blow on the head would be much more dangerous when received by a child with this constitutional predisposition, than when inflicted on another child who has it not. But I regard blows on the head as seldom the cause of the disease separate from constitutional tendency; & my reasons for this belief are the following: I attended in the Phil. Dispensary between six & seven years, & during that time had a very extensive opportunity of visiting among the poor, & I saw, of consequence, a vast deal of practice. So far as my experience goes, I

can pretty safely assert, that hydrocephalus is not more common in the lower walks of life than in the higher circles. In fact, if called on to decide the point, with my present views, I should say that the balance is in favour of genteel life. Now, did it depend on blows on the head, it would certainly be a more common disease among the children of the poor than among those of the affluent. Those who are acquainted with the difficulties with which the poor have to contend are aware that not unfrequently the father & mother of a family are compelled to go abroad to their work, & have a large flock of very young children under the care of the eldest daughter who herself may not be more than 8 or 10 years of age. A child so situated will receive 10 blows or falls where one that is faithfully nursed will receive one. Hence the disease should be more common among the poor than the rich: the reverse of which, however, is the case.

Hydrocephalus is an extremely obscure & often a very invidious disease: I wish to fix this in your minds as an important principle. — I find it difficult to undertake a satisfactory description of this disease in its early stage, as I know of no one diagnostic symptom. But if called on to speak of any one in particular, I should say that an irritable stomach, as a general rule, is a very common attendant of the early stages of hydrocephalus; & it is not uncommon, at the same time, to meet with constipation of the bowels. In addition to these you will find an irregular febrile state — the child appearing very sick, nor yet altogether well. This mild febrile

disposition sometimes disappears sometimes appears in the form of an intermittent; sometimes in that of a mild, but very very irregular remittent. I have been very much deceived by the intermissions in this disease: because, reasoning a priori, they are entirely opposite to any thing we might expect. If for example, the disease is fairly formed, & so important an organ as the brain materially affected, we could hardly calculate that the patient would be, for hours together, exempt from those symptoms which mark disease of the brain. Such, however, is the fact; & having been deceived myself, I wish to guard you from falling into the same error. Further, as there is so much uncertainty in this disease, I wish you to be aware that an intelligent nurse or an affectionate mother is frequently apt to take the alarm before the practitioner is all prepared for the impending danger. Hence, I wish to impress on you the propriety of not treating lightly the fears of the mother or female attendant who, being constantly with the child & comparing its present state with the state of health, & moreover observing all those little matters which, in the aggregate, are so important, are capable of forming a pretty good judgement as to the nature of the complaint. I recollect attending in a family in this city, a respectable old lady who had been extremely ill. Dr. Hewson & myself were in attendance together. In the course of our visits we were frequently requested by the lady of the house to examine a child of hers, an infant of 6 months; & by the solicitations of ~~another~~ the mother we

were induced to pay some attention to the child as we passed along to the room of the grandmother. We both thought that the fears of the mother induced her to apprehend danger, where, in fact, there was no cause for apprehension. She frequently told us that something was the matter with its head. Some slight medicines were administered; but we resorted to nothing active. At last, however, hydrocephalus developed itself in its most alarming form, & in a short time the infant died.

On another occasion I was called to a respectable family, in this city, with a truly respectable physician:- & here I can impart to you an useful practical lesson. This gentleman was attending one of the children of the family with what appeared to him to be a very slight disease, & probably in the same situation I should have been of the same opinion. He saw nothing in the child to excite his apprehension; but the female part of the family were under great fears, & a consultation was proposed. This the gentleman declined, stating as his reason was too slight to render it necessary. Here he erred: for I consider it to be the right of the patient, or his friends, to have a consultation whenever they please; & as the practitioner in attendance bears no part of the expense, he has no right to say it shall, or it shall not, be. - After continuing for a day or two he became alarmed & requested a consultation himself. I saw the child with him; & it proved to be one of those very obscure cases which develope themselves

just at the close of the disease. As you may readily imagine, the case terminated fatally.

One symptom further of the first stage I would here mention, as stated to me by my departed friend, Dr. Wistar. In the case of his own child, who was extremely ill with hydrocephalus, he was struck, a week or two before he became seriously alarmed, with a disposition on the part of the child to press its head against his breast, whenever he took it up to caress it. This was evidently caused by an uneasy sensation in its head for which it derived some relief from pressure.

Another symptom I might mention, which in some very violent cases may be met with in the early stage: I allude to sudden & violent screams, without our being able to assign any cause. Sometimes, however, if the child is old enough, he complains of pain in the head.

By these sudden screams, the irregular pulse, the constipated bowels, the irritable stomach, &c. we are sometimes enabled to detect the approach of hydrocephalus. As relates to the secretion of the kidneys, I have been repeatedly disappointed by finding that it went on well. And as to the pulse, I do not know that it can be distinguished from that which accompanies other febrile conditions of the system.

I have thus stated some of the most prominent symptoms which characterize the early stage. When the complaint passes along to its more advanced form, other symptoms occasionally become very obvious. Among these, I will

consider the condition of the eye. In many cases the pupil is very largely dilated, strabismus occurs, & sometimes a loss of vision. This state of the pupil may not appear till a very late period of the disease; & I believe, in the latter stages, it is always observed. – I will here make a remark on the pupil which I consider important. In the most healthy state of the brain, the pupil is liable to dilitation under circumstances which I am about to state to you; & a knowledge of this fact is of consequence: because, when you are searching for symptoms in some obscure cases of disease, to enable you to form a correct judgement, it is absolutely necessary to distinguish healthy from morbid actions. Thus, if you have a child under your care, & suspect the existence of hydrocephalus, upon entering the room while the child is asleep & examining the eye, you will find the pupil contracted: but the instant that you rouse the child & its eyes open, the pupil suddenly dilates. This might induce you to suspect that some mischief was going on. Dr. Wistar & myself once attended the child of a gentleman in this city, who had previously lost one with hydrocephalus. The little fellow had some obscure symptoms, & to be on the safe side, we shaved & blistered his head. In the course of our examinations, that condition of the pupil was very manifest. It struck me as possible that this might be the natural state of things. & I suggested to the Doctor the propriety of examining the other children who were then asleep in another room. We ac-

cordingly entered their chamber, & upon trial found exactly the same result. While they were in a sound sleep the pupil remained contracted; but it instantly dilated when they awoke. The Dr. requested me, when I returned home, to examine my own children; I did so, & found a like result.

There is another symptom which is not an uncommon attendant of this disease, particularly in the latter stage, tho' it may occur of the complaint. This may certainly be regarded as a very unfavourable symptom: I allude to a rolling motion of the head.

Though the pulse, early in the complaint, has the same character as in fevers generally; yet in the latter stages a change almost always takes place – it becomes slow, full, & irregular. I have often observed at this period a throbbing motion of the carotids, giving the idea that the blood was driven forward into the head, & there meeting with some resistance, communicated a peculiar jar to the great arteries leading to the brain. The same thing may be observed in some cases of effusion of blood within the cranium.

Hydrocephalus is mostly closed by convulsions. Sometimes a day or two previous to death hemiplegia takes place. I have this distinctly marked in dropsy of the brain.

From all these views you may understand that this disease is very obscure; & in order to illustrate several of the points I have stated, & particularly the insidious & obscure nature of the complaint, I will present you with an account of the following cases:

2d mo. 15th, 1820. Case of Dr. Hewson's Child. — The longer I live, the more I am convinced that hydrocephalus is often a very insidious disease. I was this day engaged in the examination of a very lovely infant, aged 2 years & 5 months, the son of my esteemed friend Dr. Tho. T. Hewson. The child had been sick for 2 weeks; the first week but slightly indisposed with occasional sickness of stomach & rather a constipated state of the bowels; but with very little fever. It was thought ~~proper~~ probable that worms might have some agency in his indisposition; & I believe some vermifuges were given. About one week after the child was first taken sick, Dr. Otto was requested to visit him; & from the obscurity of the case, he as well as Dr. Hewson began to suspect the head as the seat of the disease, merely ~~in~~ consequence of the situation of the stomach & bowels. A system of alvine evacuations was attempted, & was partially accomplished; but not being followed by that improvement which was desired, I was called in consultation on the evening of the 10th instant. At this time I found him with perfect clearness of intellect; no intolerance of light; no contraction of the brow; no rolling motion of the head; an eye & countenance perfectly natural, & a pulse nearly 120 in the minute, but rather variable. As his stomach was disposed to be irritable, a blister had been applied to it. When he felt pain either in the seat of the blister, or in the bowels, he was perfectly sensible & would refer to the part. Thus he would say his belly ached, &c. but when asked respecting his head, he would acknowledge that it hurt him. His sleep & position

in bed were perfectly natural. On the morning of the 11th, we found that some senna tea taken during the night had procured several pretty free discharges from the bowels; but still he was not well. He had pretty generally a slight exacerbation of fever about 10 o'clock every day, & something like sordes appeared on his lips & gums. I entertained a hope that it might be free of the remitting form, although somewhat obscure; but still, as a measure of safety, it was concluded to shave & blister the head in anticipation of a more developed form of hydrocephalus. This was done in the morning. In the course of the night, the blister produced some strangury & tenesmus. It was removed on the 12th, & a poultice was applied to the head. On the evening of the 12th, we were informed that in the afternoon, he had several times screamed out in his sleep, & for the first time complained of his head. But alas! his pulse now told us what we might expect – it was reduced to between 70 & 80 strokes in the minute & was very irregular: it was truly a hydrocephalic pulse, & we now began to have afflicting evidence that our gloomy anticipations were well founded. Dr. Otto & myself parted from our friend Hewson pretty late that evening, with very gloomy feelings. It was concluded to keep up a gentle action on the bowels. But how were we surprised next morning, (the 13th,) when we were informed by the father that our little patient had passed an excellent night & was better. We found that his pulse had entirely lost the character it had assumed the preceding evening; beating at this time 120 strokes in the minute. His intellect

was perfectly clear, & there was not the slightest complaint or appearance of uneasiness in the head. His vision was good; the pupils were perfectly natural; there was no intolerance of light, or rolling motion of the head. He would ask for drink, & take the cup into his own hands. The day passed away very pleasantly. The bowels were moved three or four times, & the urine was freely passed. Late in the evening when we left him, we observed a disposition to slowness of pulse; but in no other respect was there any thing to alarm us. It appears that towards morning he awoke & was evidently delirious. Soon after this violent convulsions ensued, & about 8 o'clock, on the morning of the 14th he died.

Dr. Harlan made the examination for Dr. Otto & myself; & reported that he found no water in the right ventricle; but from the left & from the third & fourth ventricles he procured about 6 oz. of serous fluid. The vessels of the brain appeared as if injected with blood. The cavities of the thorax & abdomen presented no unusual appearance, except that the great curvature of the stomach had undergone a very considerable digestion.

The fact of the pulse regaining its frequency after it had assumed the slow & irregular beat of hydrocephalus, is to be regarded as somewhat unusual: but I have seen a similar instance in the Daughter of my friend, Dr. Otto, whom I attended last fall in consultation with Dr. Hewson. In making this remark relative to the pulse, I do not allude to the frequent pulse which almost inva-

riably occurs in the very last stage of hydrocephalus, & often attended with convulsions &c.&c. – it is a very different thing from this.

On the subject of the treatment of hydrocephalus, I shall not detain you very long. We will now presume that we have before us a case of this disease fully formed & that no doubt remains on the mind of the practitioner as to its real nature – What mode of practice ought we to institute for the cure? Those who regard the disease as consisting in a primary affection of the stomach, & a sympathetic affection of the brain, place great reliance on the use of emetics I am unable to speak either for or against the practice from my own experience. Because considering the irritable condition of the stomach observed in this disease as depending, not on a primary disorder of that viscus, but as ~~exciting~~ originating from the sympathy exciting between the stomach & the brain, my attention has always been directed principally to the head. As constipation of the bowels is very generally an attendant upon hydrocephalus, the propriety of emptying the alimentary canal by catharsis is very obvious. Hence, in the beginning, I am friendly to brisk purging; & through the whole course of the disease, I am desirous of keeping the bowels, at any rate, in a soluble condition. If heat of skin & an active state of pulse, manifesting considerable febrile excitement, exist, general & topical bleeding, I believe may be advantageously employed. Leeches to the head I consider as a very valuable part of the treatment.

But the remedies which I have proposed, though very proper in their places, are not alone to be relied on. I think I can say, that I have seen blisters over the whole head of the most essential service. It is a practice which I invariably pursue myself, & which I strongly recommend to you.

I have stated that idiopathic hydrocephalus, when fairly formed, rarely terminates in any other way than in death. But in the course of my practice I have seen two or three, certainly two, well formed cases of the disease, which eventuated in perfect recovery. At least they were so fully formed that had the patients died, as I expected, I should not have had any hesitation in pronouncing them hydrocephalus. One poor child I attended in the early period of my practice. In the progress of the case several convulsions took place; & in addition to other alarming symptoms, hemiplegia made its appearance. This child recovered. The recovery was slow, but it was perfect. If my memory serves me right the patient was bled two or three times, & the bowels were kept open with calomel. But the remedy which appeared to me to be the most serviceable was a blister to the head. This was maintained for a long time, – not only for weeks, but even for months. I was very apprehensive, in this case, that the disease would have a condition of the intellect even worse than death itself. I watched the child occasionally for several years, & was really fearful that it would be an idiot: but happily I was mistaken in my prognostic. Every appearance of the complaint wore off; & when last I

saw him, which was several years after his first attack, he appeared to be a very sensible, & "if his mother might be believed, a very smart child". Perhaps maternal fondness may have exagerated his powers of mind: but it is very certain that not a vestige of the disease remained.

I once attended, with Dr. Perkins of this city, a child of Charles Harper, that was very ill with symptoms of hydrocephalus. Contrary to all our expectations, he recovered. The bowels were opened & leeches were applied: but I believe that a blister to the head had the most important agency in effecting the cure.

But it is necessary for me to call your attention to another remedy which has been very strongly recommended by some practitioners of deserved eminence, who have carried the practice to a very great extent: I allude to the use of mercury with a view to its salivant power, or rather its peculiar power on the whole system. That great, & justly distinguished physician, Dr. Wistar, was strongly attached to the use of mercury in hydrocephalus; & the quantity which he employed in some cases was very great indeed. In the case of his own child, now a fine, healthy, & intelligent boy, mercury was carried to a very great extent. But I must acknowledge that I am opposed to the use of this article, to the extent to which it has been used in some cases of hydrocephalus. Instances have occurred where the remedy has proved worse than the disease; where after the symptoms of hydrocephalus have disappeared, the patient has finally

fallen a victim to the violence of the medicine which was administered to cure him. This generally occurs at a period of life when mercury pushed to any extent is very injurious to the constitution. Dr. Rush, who was a strong advocate for mercury in many diseases, was opposed to its extensive employment in children under 10 years of age. So that considering the hazzard incurred by a very strenuous employment of mercury; & recollecting that it does not always succeed, even when pushed to its utmost extent; remembering too that under a milder practice, we occasionally witness a recovery - taking, I say, all these circumstances into consideration, I am not by any means satisfied to use this remedy very extensively in the cure of hydrocephalus. With a view to its purgative effect, & in small quantities, to its operation on the system, I have no objection. But to lay the patient in a bed of strong mercurial ointment, & use pound after pound of this article, is a practice which I confess I cannot approve.

Sympathetic Affections of the Head.

Having taken these general views of the treatment to be followed in cases of genuine hydrocephalus, I now pass on to the consideration of some diseases of the head which are the result of sympathy. Every practitioner is familiar with the fact that there are various affections of the head which depend on the sympathy of the brain with remote parts. You are all aware

that the brain & stomach have a very remarkable sympathy with each other. Every days experience assures us of this fact. It is offered as an argument that hydrocephalus is primarily seated in the stomach, because the disease is generally ushered in by an irritable state of that viscus, indicated by nausea & vomiting. Now if we examine this position, we shall find that the occurrence of nausea & vomiting cannot be given as a proof that in every instance, the stomach is primarily affected. Because surgery teaches us that the stomach may be most violently irritated from a primary disease of the head. I need go no further than to call your attention to concussion of the brain. A person will fall & receive a severe blow on the head which will produce what is commonly called stunning. What is the order of symptoms in such cases? One of the first is a very irritable condition of the stomach – severe vomiting is a very common attendant of concussion of the brain. I have known the irritable condition of the stomach to last for a day or two; & then all the symptoms to disappear & the patient do well. But the fact is familiar to every surgeon that a blow on the head will cause sickness of the stomach. Hence why must we resort to a primary affection of the stomach to explain a disease of the head, when it is certain that affections of the head may be followed by an irritable stomach as a consequence? That stimulants act on the brain through the intervention, we all know – the common habit of drunkenness shows this. Strong drink taken into the stomach is very speedily followed by morbid irr-

pressions on the brain — the same thing follows repletion, or distending the stomach with food. This fact was exemplified in the case of a little boy, the son of Elisha English. He partook largely of animal food, & soon after dinner, while playing, he fell down in a state of stupor & complete insensibility. When I saw him his pupils were largely dilated, his skin cool, & pulse slow. A kind of apoplectic condition had taken place, depending on the engorgement or overloading of the stomach. This state of things was relieved by emetics copiously administered, which brought up a large quantity of undigested aliment.

The difference between sympathetic affections of the brain & primary disease of that organ, is very considerable as regards the issue of cases. In inebriety to which we have just alluded, where the brain is so highly excited, we know very well, & daily experience teaches us that dangerous consequences seldom result. And in the case of repletion which I related an emetic relieved the patient at once from danger.

It has been stated that the stomach from its peculiar organization is much more likely to be affected by morbid causes, so as to produce disease of the brain, than the brain is to be primarily affected. It appears to me that this reasoning is not regulated by sound principles. That the stomach is susceptible of being acted on by a variety of causes, we will all readily admit: but when we view the structure of the brain, the blood vessels ramifying through it, & the membranes investing it, we can as readily conceive that mor-

bid causes should act directly on that organ, as that they should first produce disease in the stomach, & then sympathetically affect it. Disorders of the stomach are exceedingly common; but genuine hydrocephalus, on the contrary, is rare. In speaking thus, I wish to be understood as making a distinction between the genuine & sympathetic disease.

Among the diseases of sympathy with the stomach causing apparent disease of the brain, I will call your attention to yellow fever. In this complaint I have seen the most profound & deadly coma evidently depending on primary disease of the stomach & alimentary canal. I have seen this, & on dissection have found a natural brain. But in hydrocephalus we rarely if ever discover a natural appearance of this organ.

The heart & brain sympathize with each other. You will find in the works of Corvisart & Warren, who have both written treatises on the diseases of the heart, that patients are very apt to be affected with maniacal symptoms & evidences of diseased brain depending on the sympathy of this organ with the heart. In the case of a young I met with a disease of the heart, which terminated fatally: I made a dissection & ascertained the fact. In this case fair formed mania occurred in the latter stages. In my lectures on consumption I told you I had seen several cases of that disease accompanied with acute mania in their last stages.

I was once called by the late Dr. Wollens to see with him

a patient in the Northern Liberties afflicted with a most extraordinary disease of the head. It could scarcely be called pain; but there was a sense of continual buzzing which kept the patient in a state of uneasiness. Large opiates had been administered by the mouth, & evacuations of various kinds had been resorted to before I visited him. In this instance finding that opiates by the mouth had failed, & conceiving that an impression on some remote part might be more effectual I advised an anodyne enema. This was given with the most happy effect. In the course of my attendance Dr. Wollens stated that some symptoms of hepatic disease had been perceptible. But so severe was the complaint in the head that we seemed to lose sight of the liver, & all our efforts were directed to the brain. Soon afterward the patient died. Dissection exhibited to us a very large abscess of the liver. In this instance Dr. Wollens offered an explanation of the symptoms of the brain, entitled to credit from its ingenuity. He observed that in many cases of inflammation of the liver so much complaint was made of pain in the shoulder, that practitioners had been induced, in some instances, to apply a blister to the part, but without any pleasant effect. If the shoulder is affected to such a degree from disease of the liver, why may not the brain also sympathize with it? And in this case there can be no doubt that the complaint in the head was sympathetic, depending entirely on the hepatic disease.

The bowels, in some instances, sympathize with the brain, & in a most extraordinary manner. As a confirmation

of this, I refer you to the case of Jos. Gibbon's child, (see p.) in which mania of a very unpleasant nature was induced by a spasmodic affection of the bowels; also to the case of a little girl, attended by Dr. Wistar, (see p.) that fell into a state of mania which continued for 3 weeks, & then suddenly disappeared in consequence of the discharge of a large number of ascarides from the rectum.

Violent affections of the head we well know, depend, in many instances on primary disease of the stomach. Among these affections not the least unpleasant is the sick-headach. This is a disease to which some individuals are peculiarly liable. The suffrings & apprehensions of danger during the paroxysm afford no little uneasiness; yet it may continue for years without danger. — For an excellent paper on sick headach, I refer you to the posthumous works of Dr. Fothergill who was himself afflicted with the disease.

All these cases are calculated to show that the brain may be affected in consequence of sympathy with various parts of the body — not only is the stomach to be regarded as a point sympathizing with the brain; but even the heart & the contents of the thorax, may be so affected as to produce apparent disorders of the head; the same may be said of the small intestines, the rectum & the liver.

But it is of great importance in a practical point of view to ascertain the seat of disease so as to attack it with the fairest prospect of success; & with my views of idiopathic hydrocephalus, that practice which is directed to the

stomach is not conformable with my notions of what is proper. I wish particularly to impress on you that an irritable stomach is no more to be regarded as the cause of hydrocephalus, than the same condition, under other circumstances, is of concussion of the brain. Hence the practice of giving emetics does not appear to me exactly accordant to my views; & yet if ~~emetics~~ experience shall prove it most successful, I hold myself ready to adopt it.

In the course of my practice, I have sometimes been very much at a loss to distinguish between idiopathic disease of the brain, & that which depends on certain conditions in fever. The infantile remittent described by Dr. Butter (whose work deserves your attention) is characterized thro. every stage by a strong disposition to coma. I have seen the coma continue many days. At one time I thought I had discovered a certain diagnostic between this fever & hydrocephalus. It was this: When coma occurs in hydrocephalus, it generally happens that the child is not in an irritable state. It is a difficult matter to excite it; & you may handle & move it about without disturbing it: whereas, in the infantile remittent, the coma is accompanied with an irritable condition of the mind, & a fretful disposition. When you attempt to make an examination, the child turns quite round & seems unwilling to be disturbed. By this circumstance I thought I should be able to distinguish between the two complaints. But subsequence experience has led me to the conclusion that

this is not an infallible diagnostic symptom. For I have seen an irritable condition of the mind in hydrocephalus, which might be excited even after coma had appeared. But in cases of other diseases which have fallen under my observation, I have never met with the hydrocephalic pulse. To this pulse I have before particularly called your attention. I mentioned the case of Dr. Hewson's child, & also that of Dr. Otto's. In the former the only circumstance which enabled us to decide positively, as to the nature of the disease, was the peculiar pulse. It was slow & irregular; & what is remarkable, gave way to that frequent pulse which is peculiar to fever; but it again returned. I once had, in consultation with Dr. Neil a patient of Dr. Hewson's under my care, a young lady by the name of Marcoo, whose case had every appearance of hydrocephalus except the pulse; & contrary to every rational expectation, we had the pleasure to see her recover.

Every practitioner meets with some very obscure cases relative to which he is unable to decide whether they are hydrocephalus or not; & I believe that many instances of recovery from reputed hydrocephalus, are nothing more than the common infantile remittent of our country.

Apoplexy.

Apoplexy consists in a distension or rupture of some of the blood vessels of the brain. This is a very distinct disease from epilepsy :- & just at the threshold of the subject, it may be proper to devote a few minutes in drawing a line of distinction between them ; because I regard a proper diagnosis in this case, not merely as a matter of curiosity, but also as a matter of real utility. Apoplexy requires a different course of treatment from that which is demanded in many cases of epilepsy, particularly when this complaint is of a chronic character. How are we to distinguish between them? In both there is insensibility ; in both the patient is suffering under what is called a fit. One of the most remarkable points of difference is this : In epilepsy we see struggling, & in many instances, violent muscular exertion : whereas, in apoplexy there is generally a quiescent condition of the muscles. In the latter disease we find a slow, laborious pulse, which is seldom so marked in the former. Epilepsy is a disease of frequent occurrence ; it often acquires a chronic character, & may continue for many years. I think I have seen great mischief in practice from confounding the two diseases. I recollect a case of chronic epilepsy where depletion was carried to an extent altogether remarkable & the patient unnecessarily brought into imminent danger.

Apoplexy & palsy may be regarded as grades of the same disease; & it is not uncommon for apoplexy to terminate in hemiplegia or a paralytic affection of the side. Apoplexy is not unfrequently preceded by some premonitory symptoms; & I am inclined to believe that there are few physicians of any experience who if applied to at a proper period, would not be able to ward off the disease in many instances. If you find a patient under an obtuse state of mind with heaviness & a disposition to sleep, with a full, slow & powerful pulse, & giddiness of the head, you may suspect that an attack of apoplexy is approaching. Under such circumstances pretty smart depletion will often prevent the occurrence of the fit.

I have known one instance where the disease was preceded by an universally irritable state of mind. The case was that of a young lawyer who had previously consulted a young practitioner of medicine, a friend of his, who not fully appreciating the nature of the disease, directed an emetic. The very same night that he took this, an apoplectic fit seized him, which terminated in palsy of the right side, from which he has not yet recovered, though several years have elapsed since the occurrence of the attack.

~~I have known one instance where the disease was~~

Dr. Rush divided apoplexy into two species – the <u>white</u> & the <u>red</u>. The white, as you may easily imagine, is by far the most dangerous & fatal form of the disease: for we mean by this term that condition where effusion has

has absolutely taken place. But in the red apoplexy there is reason to believe that nothing more exists than simple distension of the vessels, which may be removed by a timely interposition of the lancet, & fatal consequences thus prevented.

The termination of apoplexy is, in some instances, instantaneous — death seems as suddenly induced as if a bullet had passed through the brain. I once saw a case not quite so sudden as this, which was attended with a condition of the mind somewhat peculiar. An old black man, 80 or 90 years of age, was in the habit of attending Friends Meeting in Arch Street — One day he fell down in the meeting house in an apoplectic fit: he was carried out into the yard, & I saw him immediately. He recovered so far as to give correct answers to some questions which were put to him, complained of sick stomach, & perhaps in less than 5 minutes afterwards expired.

Red apoplexy may sometimes be most happily treated, if vigorous measures are interposed at the right time. I was once called, with Dr. Griffitts to the father of Dr. Harlan, who was attacked, as he was walking through market, with a fit of apoplexy which produced hemiplegia. But in this instance, the timely interposition of proper practice dissipated all the dangerous symptoms, & in a few days he was about as before; & he has since continued free from the disease.

Apoplexy occurs at every period of life; though it is more common after the middle age, & in advanced life.

Even the most tender age is not exempt from the apoplectic stroke; & it is not uncommon for persons in the most active period of life to fall victims to the disease. I once attended a young lady under 20 years of age, with a slight paralytic affection of the mouth, which appeared to interfere ~~with~~ very little with her ordinary avocations. She was treated with evacuations, & seemed to be getting better. Soon after this, I was suddenly called in the morning. Dr. Chapman, (who lived near & had also been called,) was already there. But we arrived merely to see her expire.

We read in books, & the opinion too is generally received, that certain configurations of the body predispose to apoplexy. Thus a short neck & a large head are supposed to be an inviting state to the disease; & I believe that the opinion is not without some foundation. But it by no means happens that persons of an opposite conformation are free from the disease. I have known it to occur in persons of a most remarkably delicate form, who were not marked with any of those peculiarities which are supposed to indicate a predisposition to the disease.

The state of the mind in this disease varies most surprisingly. Although we generally find it locked up in a state of profound coma, when the attack is violent & deadly: yet in the case of old Primus, the black to whom I have alluded, there were signs of considerable intelligence. In a case of fatal apoplexy, where the pupil was dilated, the pulse laborious, & every thing in-

dicated great danger, I have seen a condition of mind that truly astonished me. I recollect being called to a Swiss gentleman, residing above Bristol, whose name was Leopold Nattnaugle. When I saw him, he was in the state just described; yet his intellect was so far capable of bursting the barriers of disease which surrounded it that he recognized me, & told me that he knew my father & brother. Yet when allowed to rest he fell into a state of coma with that stertorous respiration which forms so prominent a symptom of the disease. He finally died.

Dr. Chandler, a medical character & a Methodist preacher, was seized with an apoplectic fit while standing in the pulpit in the act of preaching. His intellect was also remarkably clear: but he never recovered from the attack – he lingered along & finally died.

Though the pupil is generally dilated; yet I have seen cases of apoplexy where it was contracted. This you will readily believe, when I call your attention to cases of compressed brain in which great variety is observable in the state of the pupil – this being often largely dilated, & in many instances morbidly contracted.

Having given this general outline of apoplexy, & considered it as a disease in which there is an undue determination of blood to the head, where the vessels the vessels are in a state of very great distension, & rupture often ensues, it is now proper for me to mention those indications of cure on which the practice ought to be grounded.

In red apoplexy, when you are called to a patient with a flushed face, slow, powerful & laborious pulse, stertorous breathing, & other symptoms indicative of the most extreme danger, you cannot but be impressed with the importance of this injunction; "What thou dost, do quickly." This is a moment for decision & vigorous practice. To unload the blood-vessels promptly is the first indication; & if the symptoms are very urgent we are to resort to other parts beside the arm. When you recollect how accessible is the temporal artery, & with what entire safety it may be divided, your own good sense will suggest to you the propriety of opening one or both of these vessels. I have seen the circulation so powerful in the temporal arteries, that a considerable amount of blood has been obtained from them in a short space of time. I have sometimes, after bleeding pretty freely, removed the bandage from the arm, & allowed the blood to flow simply from the impulse of circulation: for it is much safer for the blood to find vent through an orifice in the arm, than for the vessels to relieve themselves by effusion on the brain.— I was once called to a patient, named James Higgins, who had been several years labouring under hemiplegia, when he was attacked with a fit of apoplexy which proved his last. The violent action in the temporal arteries induced me to open both, & so forcible was the stream that it occasioned musical sounds as it struck against the sides of the tumbler. In the case of my respected friend & worthy neighbour, Dr. Dunlap, who was predisposed to apoplexy, & had suffered under several attacks,

upon calling in accidentally to visit him, I found his face flushed & other symptoms amounting almost to another attack. I opened the temporal artery, & in a small space of time obtained 16 or 20 oz. of blood. He was sickened by the operation & I stopped it. – To illustrate my practice with regard to bleeding in apoplexy, I will state one or more cases which have occurred to me.

Case of Nathan Field. – This old gentleman possessing a powerful constitution & a very plethoric habit of body was attacked with red apoplexy, or rather the disease was in its forming stage & had hardly developed itself. He had been engaged in a cellar in sawing or splitting wood, & had used considerable exertion. Soon after coming out of the cellar he was attacked, & was found in this condition. His face was very much flushed, his pulse very strong & slow, there was an obtuse state of mind, but not perfect insensibility: his speech was very thick, & there was considerable loss of power in one side of his body. Under these circumstances, I immediately opened a vein, & bled him freely. Guided by the state of his pulse I let the blood flow till 60 oz had been abstracted from his arm. By this time there was an evident abatement of the dangerous symptoms, & his arm was tied up. Dr. Griffitts saw him with me in consultation. After this he was cupped freely. By these means & by the use of other remedies which appeared appropriate, a recovery was effected.

Case of Amos Taylor. – He had been for some days previous to the attack affected with an unusual degree of heav-

iness. He was much disposed to sleep, nodded frequently in his chair, & was affected with vertigo. This condition of things lasted for some days. If a physician had been made acquainted with these circumstances, & proper measures had been employed, the attack would probably have been warded off. Late one night, I was sitting in my parlour reading or writing, when his son-in-law came running down with great precipitation & requested me to see his father immediately. I ran up, & it was happy for the family that I had not gone to bed: for, from the violence of the symptoms I think it probable that before I could have dressed myself, the case would have terminated fatally. When I came, I found him with deep stertorous respiration, a laborious pulse, & a total quiescence in his muscular system. I at once recognized apoplexy, & immediately resorted to the lancet for his relief. I abstracted about 40 oz. of blood. At this time his pulse gave way, & something like syncope occurred, which very much alarmed us. From this, however, he recovered. The immediate danger disappeared; & though he still labours under hemiplegia & a partial loss of speech, yet we are not without hopes that the power of his muscles & his speech may be restored, & a life of much usefulness preserved for his family & friends.

Note.— 1825. The gentleman above alluded to has not yet recovered the power of distinct articulation. He has considerable acuteness of mind, & is able to calculate, &c.

In addition to local bleeding from the temporal artery

& general bleeding from the arm, in cases like the preceding, you can easily understand the absolutely necessity of unloading the bowels by active purging & by injections. After these have been thoroughly evacuated, I believe, in many instances, great benefit will result from the exhibition of calomel with a view to its effects on the whole system. Dr. Griffitts is much in the habit of purging with calomel alone. Thus, he administers ʒ gr at intervals of a few hours; so that at the same time they open the bowels, by lying in the stomach, they also produce the general mercurial impression. But I prefer brisk purging in the first instance, & afterwards a resort to calomel in small doses with a view to its action on the system. Tho' no absorbents have been discovered in the brain, yet the dissections of Abernethy & others show that lesions have been produced by apoplectic effusion, & traces of them left, though the effused fluid has been removed.

In addition to these general remedies, it is also proper to resort to cupping on the temples, forehead & neck, & to extensive blistering over the scalp. I wish strongly to impress on you the necessity of employing blisters, which should be large & kept open for some time by stimulating dressings.

With respect to the treatment necessary for the paralysis which occurs after apoplexy, I shall for the present waive the consideration of it, till another time.

Having taken this general view of the disease itself & of the treatment as applied to the common form of apoplexy, in its more hopeful condition, I have only to remark, that

in the white apoplexy of Dr. Rush there is little chance afforded us of doing any thing: & yet even here, though you have a very slight prospect of success, if the pulse will admit, you should resort to the lancet & ascertain how far evacuation can be borne. But if the pulse faltrs, & cold, clammy sweats are observed, vigorous depleting measures should certainly be avoided.

While speaking of apoplexy as it commonly appears, & of the treatment which answers so well in certain cases, it is necessary for me to inform you that exceptions to the rules laid down, will occasionally be met with in practice. Perhaps it is in consequence of meeting with some of these exceptions, that certain respectable practitioners consider the abstraction of blood as of doubtful propriety. Dr. Fothergill, if my memory serves me right, was rather opposed to V. S. carried to any great extent in this disease. Perhaps he fell in with some of the exceptions alluded to, & suffered himself to be influenced too much by his own experience.

I once attended, for Dr. Griffitts, a patient who was attacked a few hours before I saw him with apoplexia, & hemiplegia partially induced. When I visited him, the symptoms appeared to me to require the free use of depleting measures. I bled him, but not to the extent of the cases which I have before mentioned. Cups were also applied to the head. Soon after this I left him & informed Dr. Griffitts that I had seen his patient & wished him to visit him soon. He did so, & found that he had fallen into a state of most alarm-

ing debility: so much so that it was necessary to resort to wine-whey, sinapisms, &c. to rouse him. These remedies produced a temporary effect; but he ultimately died.

But a much more extraordinary case than this sometime afterward fell under my observation. The mother of Dr. Perkins was attacked with what appeared to be apoplexy, & at the same time, with hemiplegia. I was requested to see her with her son - Dr. Thomas had also visited her. When I saw her Dr. Perkins told me that he had attempted depletion; but found that she could not bear it. I thought it was with the Dr. as it is sometimes with me when called on to prescribe for any of my own family - I supposed that his feelings had got the better of his judgment, & that he was not so capable of deciding on what was proper, & what improper, as another who was not so close interested. I was disposed to try what would be the effect of some evacuation. Dr. Thomas remained with her during the night: some cups were applied; but by a small abstraction of blood, the pulse was seriously affected, & further depletion could not be borne. We therefore desisted from the depleting plan, & the old lady got well under very mild treatment.

I thought it proper to mention these exceptions, so that you may be on your guard if you should chance to fall in with similar ones. You should not, however, be so influenced by them as to lessen your confidence in blood-letting as a general remedy, which long experience has proved in the majority of instances to be the most suitable, & in many cases absolutely necessary.

I now wish to make a few remarks relative to apoplexy & palsy in very old people. Some of them will not bear much depletion, & yet do well. My honoured Mother is an instance. Two cups bled her sufficiently. She was afflicted with hemiplegia, and almost a total loss of power in the whole frame. Gentle laxatives, a blister, mustard whey, &c. were employed, & she recovered. Other cases of a similar kind have occurred. James Jones, an old man who lived out of town was seized with apoplexy, & hemiplegia ensued. He was visited by Dr. James. As the patient was very old, the case was considered hopeless, & the Dr. thought it unnecessary to repeat his visits. Sometime afterwards the Dr. saw a man riding down Arch Street on a young horse: & who should it be but his old patient, James Jones! He rode up to the Dr. & asked him if he had seen a stray horse, & told him that he was in pursuit of one which had escaped from his field. — The result of this case shows the impropriety of abandoning the patient till death ensues.

Dr. Phineas Bond, an old & highly respected practitioner, (long since dead,) was in the practice of purging patients that were predisposed to apoplexy, with aloes, for the express purpose of bringing on hemorrhoids. This practice I consider important in many cases. When there is an affection of the head, which is obstinate — resisting the usual remedies — ask your patient if he has ever had hemorrhoidal tumours, or a discharge of blood from the hemorrhoidal vessels. There are some men who have discharges of

blood from these vessels which occur with as much regularity as the catamenia in females. I know a man who has a discharge of blood from the hemorrhoidal vessels which occurs regularly once a month. When patients of this description have affections of the head in consequence of a suppression of these periodical evacuations, you will see the necessity of resorting to active purges.

Some people are subject to vertigo. This may be induced by a variety of causes – It may be occasioned by the too free use of strong tea & coffee, &c; it may also depend on a deranged state of the stomach. I had a patient under my care who was troubled with this affection. He staggered about, & in all his movements appeared like a man intoxicated. I regulated the stomach in the first place; but this did not remove the affection of the head. On inquiry I found he had been subject to hemorrhoids. I then brought on piles by active purging. I also bled him from the hemorrhoidal vessels, which he acknowledged did him more good than any other remedy that had been tried. Dr. Physick was called in consultation. We concluded to give him a good diet; & this seemed to afford him some relief. Dr. Physick said that he had found 15 drops of laudanum occasionally given, to prove beneficial in some of these cases. We resorted to it, & apparently with some advantage. The Dr. suggested the idea that his disease was not altogether real; that much of it might depend on previous habits – having been accustomed to totter on his staff, this practice had become habitual; & that it might be associated with hypochondriasis. I next resorted to sternutatories – first tasteless mineral, then

poke-root, for the purpose of relieving the vessels of the brain by a discharge from the nose.

Disease of the Head resembling Hysteria.

I now wish to call your attention to some cases of disease of head resembling in their symptoms the common forms of hysteria; but not exactly resembling that complaint.

10mo. 30th, 1818. – Died this day Thomas Dunn, aged 22 years, a journeyman blacksmith of Joseph Gatchel. The patient called on me in the afternoon of the 27th, complaining of severe pain in the head. His pulse at this time was not tense. I directed him to go home & be cupped, & ordered an emetic of ipecacuanha. In less than half an hour, I was sent for in haste. I could not go immediately; but sent Charles Matlack, one of my pupils, with directions to have him cupped; to omit the emetic till I should see him, & to apply sinapisms to his feet. For I had some doubts as to the propriety of an emetic if the affection of the head should prove idiopathic; & from the sudden message I began to conclude that the case was more serious than I at first apprehended. Soon after he had been cupped I visited him, & was informed that on his return he appeared delirious, & that several persons were required to hold him. When I saw him he was quite sensible, his pulse was more excited, & he complained of severe pain in the head, particularly in the forehead. I directed some blood to be taken from the arm, & ordered a cathartic. In the evening I gave him pills of

assafatida & applied a blister to the nape of the neck, as he had considerable restlessness with severe nervous spells, & pain in the head. In the course of the night he became so ill that he was again bled. The assafatida was continued. My friend Dr. Moore, (living near,) saw him in the night. He had injections administered which operated. His stomach became irritable in the course of the day, & he generally rejected all his medicines. From this time his bowels were rather confined. The next morning he said that he was much better: but in the course of the day he grew worse. His nervous spells were frequent, & he had a convulsion; & Joseph Gatchel's wife informed me, that his lips & nails were blue. When I saw him in the evening he was sweating most profusely. His pulse was full & rather frequent, but not tense. He did not speak; but he appeared to understand what was said to him. He turned round towards the candle, & (mark the fact) his eye appeared natural, & the pupil contracted before the candle. I asked him to put out his tongue, which he would not do; & when I ~~judged~~ urged it, he evidently clenched his jaws more firmly. Indeed he had precisely the appearance of an hysterical patient who was affronted at the idea of the disease being known, & determined to make himself appear to superficial observers as very ill. In the course of the day I directed his head to be shaved & his scalp cupped. In the evening I ordered a large blister over the scalp & frictions of strong mercurial ointment. I observed this evening that he scratched his lip - a proof that he was awake to very slight impressions. His mother

told me that he read the newspaper this morning; & J. Gatchel said, that in the course of the evening, he played with his brother's watch chain, at a time when he did not speak. This was a case worthy of close attention; for early the next morning, the poor patient died.

The nervous spells with which he was affected bore a most striking resemblance to a case of hysteria. I should have regarded the disease as such, & told J. Gatchel that I was inclined to believe it nothing more: but happily for my subsequent reflections, I also mentioned that two cases bearing a strong resemblance to it had fallen under my notice, both of which proved fatal. One of these cases was that of the wife of Thomas Field. In both of them I pursued active treatment. In the case before me I also thought it proper to act as if there were serious disease of the brain; & I now rejoice that I did so; for had I treated it lightly as common hysteria, I should have felt very unpleasant on finding him dead. I was particularly alarmed when I heard of his <u>blue nails</u> during a nervous spell. I concluded that this must have resulted from something more serious than an affection of the nerves.

The patient often complained of pain in his head, especially when shoeing horses. He had formerly been intemperate; but for the last two years of his life he had been a sober man.

The day after his death I examined the body. The brain appeared turgid with blood – the vessels seemed to be injected, & the right ventricle contained more fluid than natural. Over the whole surface of the brain there appeared some se-

rous effusion. I should suppose an ounce & an half or two ounces of serum might have been collected. The brain perhaps might be said to be bloated.

On opening the thorax there was found the effect of some complaint of the chest; but not recent. The left lung was partially adhering to the pleura by some old & firmly organized bands. The pericardium contained about 3oz. of serum.

I thought it proper to throw these cases before you, as you may hereafter meet with such in your practice. They resemble hysteria; but in their result they are very different from this complaint.

Gout in the Head.

While on the subject of diseases of the head, I will call your attention to translated gout. It not unfrequently happens that persons affected with the gout are subject to very considerable danger, in consequence of its receding from the extremities & attacking the brain. Sometimes the phenomena of apoplexy depend on translated gout; & the train of symptoms which arises, demands a treatment in many respects similar. But when you have ascertained that gout in the head exists, & discovered from which of the extremities it has receded, then you direct those remedies which circumstances call for, as bleeding, cupping, &c. I wish you to be impressed with the necessity of making, as early as possible, strong impressions on the part previously affected. For this purpose sinapisms should be applied: these invite a return of the disease to the situation before occupied. There, the

painful, it is much less alarming & dangerous. Sometimes gout in the head assumes a chronic form. The same may be said of rheumatism. If it puts on a violent form, the same general plan of treatment is indicated; if of a more chronic character, those remedies should be employed which are adapted to the treatment of chronic rheumatism. I have used the guaiacum, particularly the volatile tincture, occasional cupping, & blisters behind the ears, with advantage.

Nervous Headach, Hemicrania, &c.

There is an affection of the head to which I wish particularly to call your attention. It is one which you will occasionally meet with in practice; & you will some day acknowledge that the information now imparted to you, has not been altogether unavailing. I allude to hemicrania. By this I mean a painful affection of the head, generally confined to one side, & not unfrequently recurring at stated periods like intermittent fever. During the paroxysm the suffering of the patient is extreme. In a case which not long since fell under my notice, the lady declared, that it really seemed as if her "eye would burst out with pain".

Now, I believe hemicrania to be generally connected with a peculiar disordered condition of the nervous system; & that, if it were considered as a disease of inflammatory character, & measures were adopted accordingly, I am

inclined to the opinion that the object of relieving the patient would not readily be obtained; but, on the contrary, that the suffering would be increased & the cure protracted.

I recollect that in the early period of my practice, I attended a young lady with this disease. I had resorted to several plans, particularly of the evacuating kind. Cupping had been used, & some temporary benefit seemed to result; but the effect was not lasting, & the disease frequently recurred. Dr. Wistar was called in consultation. He proposed that the patient should take the infusion of valerian root in the dose of a wine glassful every two hours. Under this plan she recovered. Dr. Barton in his lectures was in the habit of recommending a combination of valerian & bark.

I believe that in some instances the stomach has a very strong influence in maintaining these unpleasant. I will read you some remarks which I committed to writing soon after the occurrence of a case which I attended.

3d mo. 1820. — I have lately had several cases of hemicrania, or headach confined to one side of the head, & generally to one spot; for example, over the eye. In some instances it is periodical like intermittent fever. The case of George R. Rhum's wife was a striking one — the pain came on every day about noon & went off in the evening. She informed me it felt as if her "eye would burst out," so acute was the pain. I directed her bowels to be well opened; & as I suspected she had acidity of stomach, I di-

ented a wine glassful of the alkaline infusion three times a day, & gave her that sovreign remedy in these cases — an infusion of valerian & bark. I directed an ounce of the bruised valerian root to be infused in one pint of hot water, & the mixture to stand till cold. The liquor was then to be decanted & a wine glassful taken every hour, beginning early in the morning & adding a small tea spoonful of bark to each dose. If the pain should come on, the use of it was to be suspended. She took in this manner, for the space of two or three days, about one pint of the infusion of valerian & half an ounce of bark daily; & most satisfactorily recovered her usual health. During the treatment I directed a solid diet, such as beef, mutton, oysters, &c. &c. & paid particular attention to keep her feet warm with Cayenne peppered sock.

Inflammation & pain in the frontal sinuses, I have met with in the course of my practice, & have noted cases. But this disease differs in its periodical attacks. Whenever I find headach confined to one side of the head & assuming a periodical form, I always suspect a peculiar morbid condition of the nervous system, which will require antispasmodics & tonics to effect a cure.

I attended a gentle some time ago, in whose case two modes of practice were tested. He had been under the care of a highly respectable practitioner several years before, with the same disease. The affection was sup-

posed to be rheumatic, & the remedies were of a depleting character. He was confined for 3 weeks during which time he suffered a great deal; & at last the disease seemed to wear itself out without any appropriate effect from the medicines. When I saw him in another attack, I put him on the plan above mentioned, & endeavoured to impress him with the belief that for the first day or two no benefit would be derived; & so it happened. For the first two days, he thought the complaint not relieved, but rather aggravated. He soon however became better, & before many days was entirely cured.

Affections of the head depending on disease of the stomach, & even on disordered action of the liver, occasionally fall under our notice. I once attended, in consultation with a respectable physician, a lady labouring under the most violent headach. It occurred at irregular intervals somewhat like an intermittent. It bore some resemblance to the case of hemicrania of which I have spoken: but in some respects it was different. The bowels having been properly opened, the valerian & bark were tried: but the remedy failed of producing that permanent effect which I had desired. Some temporary relief was obtained; but the disease soon returned, & became as painful as ever. Before the relapse I had left off attending, & the physician who was first called tried the laurel twice but without any beneficial effect. The disease still remained unsubdued; & at his request I was again called in con-

nullation. Having found the tonic & antispasmodic plan unavailing, I proposed that our attention should be directed particularly to the hepatic system, & with this view that we should examine the state of the alvine excretions, to see if they were of a natural appearance or otherwise. The evacuations were of a dark green colour, rather solid, & nothing like the stools which we see in health. I proposed that we should put her upon an alterative plan somewhat similar to that recommended by Ayre in his work on marasmus. We gave her $\frac{1}{6}$ of a grain of calomel every hour till she had taken 12 doses. On the following day the infusion of rhubarb was given in order to aid the calomel in evacuating the bowels, which was several times repeated. By this plan we succeeded in procuring an entire change in the alvine evacuations. We then found that we had attacked the disease in the situation which it really occupied; & that our failure before was owing to our ignorance of this point. By the judicious use of tonics, aided by a proper diet, which was principally of animal food, & by occasional exercise in a carriage, we happily restored her to a state of health. But we were very near failing entirely in consequence of the occurrence of some circumstances which produced mental depression. We observed a disposition to a recurrence of the disease: but fortunately the mental anxiety disappeared & our patient regained her health.

Hence in those obstinate headachs denominated

nervous headachs, rheumatism of the head, &c. I would advise you to attend carefully to the appearance of the evacuations, & if their contour should indicate disordered action of the liver, that you endeavour to relieve this by small doses of calomel alternated with mild laxatives, especially rhubarb. This I consider as an excellent plan for restoring the healthy action of the liver. I would also advise you to pay particular attention to the condition of the surface, as recommended in dyspepsia.

You will occasionally meet with cases of headach in which relief may be derived from very simple remedies. One of these is the application of ether to the forehead.

The head is liable to be severely affected by carious teeth. In this case we can generally trace the sufferings of the patient to some one or other of the teeth affected. I recollect ~~one~~ being called to a lady labouring under very severe headach. Upon closely examining the patient I discovered that the symptoms arose from carious teeth. I, therefore, directed that they should be extracted, & relief was obtained. In obstinate cases of headach you should always direct your attention particularly to the teeth. A dentist once informed me that an old lady applied to him with what she conceived to be rheumatism of the head. Various remedies had been used without relief. When he examined her mouth, he found several teeth very much decayed, & the stumps of others which had entirely gone. He extracted them, & thus succeeded in effecting a perfect cure.

Disease of the Head after Parturition.

I have met with several cases of cephalic disease occurring in females after parturition, which I consider worthy of attention. In two cases the patients were affected with convulsions. Convulsions previous to delivery are generally regarded as very dangerous. In these two cases, however, I had the pleasure of seeing the patients recover their health, although the prognostic was certainly discouraging.

Case – Wife of Charles French. – 8th mo. 1812. This was a very extraordinary case taken in all its parts. I was called to the patient about 10 days after her delivery & received the following account: For two or three days after her confinement she was doing bravely: but at the end of that time, she was seized with a pain in her face, which seemed to affect her like the toothach. This pain soon receded from the face & took possession of the head, for which, by direction of Dr. Dunlap, her accoucheur, she was twice bled & blistered on the back of her neck, but without relief. He gave her opiates at night; & as there appeared to be intermissions in the morning he attempted the use of bark, which however did not suit the case & was omitted. At the request of Dr. Dunlap she was placed under my care as family physician. When I saw her the action of her pulse was very little increased, but she still complained of pain in the head. Her skin was cool. I directed a repitition of the opi-

ate which she seemed desirous of taking. I was rather inclined to attribute her disease to a rheumatic affection of the head, & I left her that night intending to visit her in the morning in regular course. But before sunrise her husband called on me, requesting my immediate attention in consequence of her being attacked with a convulsion. When I arrived she had come out of the struggle, but was quite lost. I ordered cups to the head immediately, sinapisms to the feet, & a laxative enema. I also directed the fore part of the head to be shaved, & if she were not relieved, a blister to be applied. The cupping procured temporary relief. But early in the afternoon she was attacked with another convulsion. I got to her just as she was recovering from it. She appeared to be in great distress, & quite incapable of expressing herself. The blister was immediately applied. I requested a consultation, & my worthy preceptor met me. On hearing an account of the case, he encouraged me by saying that he had met with a very similar instance in a puerperal woman, which subsided in a very short time under very mild treatment. As the Dr. appeared highly pleased with the treatment, it was of course continued, with the addition of a decoction of senna & manna. This plan was diligently pursued for several days, & the bowels were kept freely open. The blister on the head drew very finely & was of great service. - Her mind was very singularly affected. Her memory for words was almost obliterated. She could not recollect even the names of her own children; & yet at

the same time she had a perfect conciousness of every thing about her, & was entirely aware of her inability to express herself as she wished, & several times mentioned it. As was predicted by Dr. Wistar, this unpleasant state gradually subsided, & she was restored to the usual exercise of her mental powers.

Since the above case I have seen a young man who in consequence of a violent concussion of the brain, labored under the same state of mind. He was aware of the circumstances which were passing around him; but his memory for names was gone, & he had no power of expressing himself. He wished to speak to his father of Indian corn; but was totally unable to recollect the name, & was forced to resort to motions to explain himself.

Since the case of Mary French, I was called in consultation to an amiable young lady at Burlington, who some days after parturition was seized with similar convulsions. She was confined with the first child. The same practice was employed as in the former instance, & the result was equally happy. Though every thing for a few days looked gloomy, & there was great reason to apprehend the most unpleasant result; yet I was enabled to cheer them by an account both of my own previous experience & that of Dr. Wistar; & I relate these cases that, under similar circumstances, you may enjoy the same advantage.